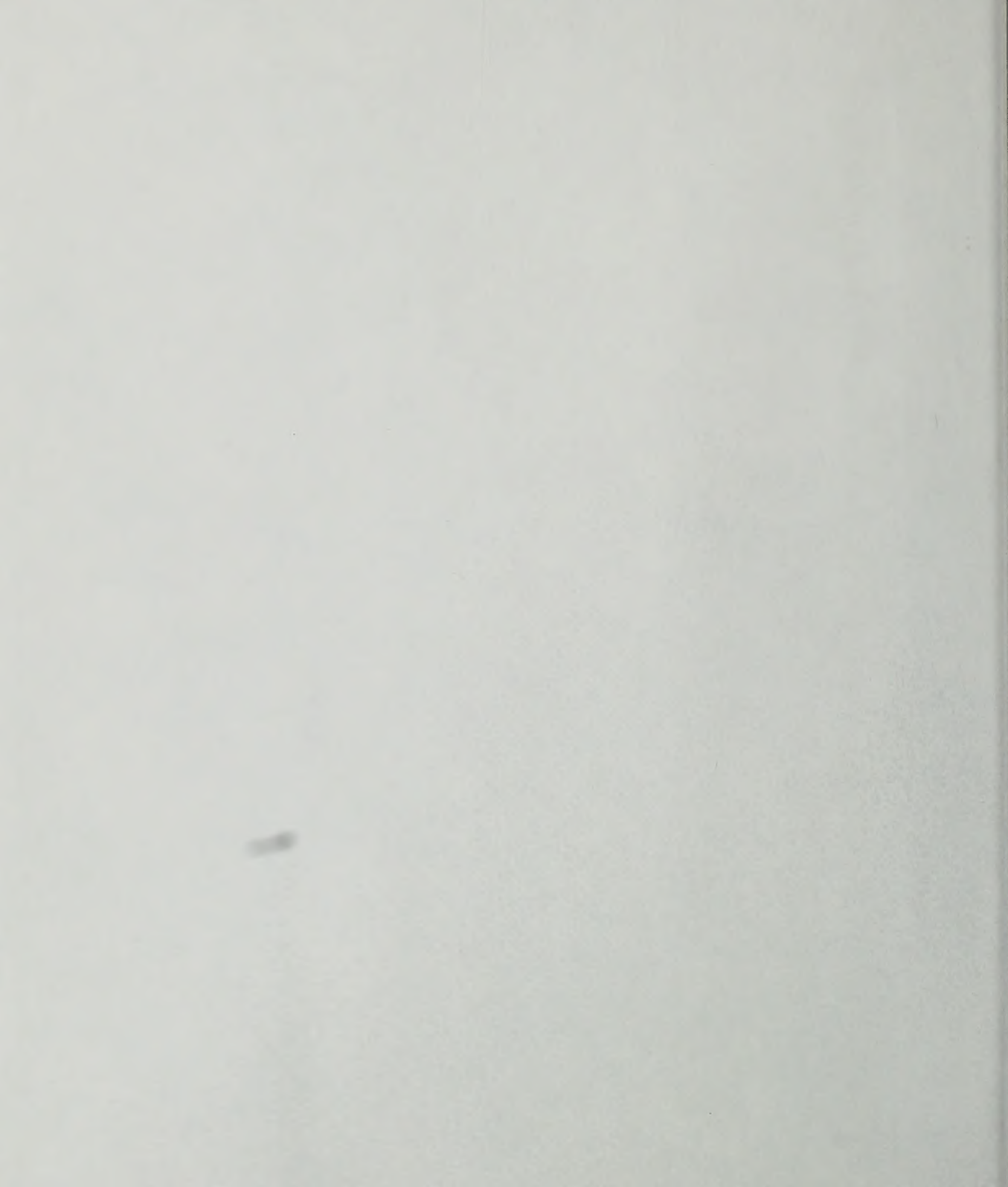


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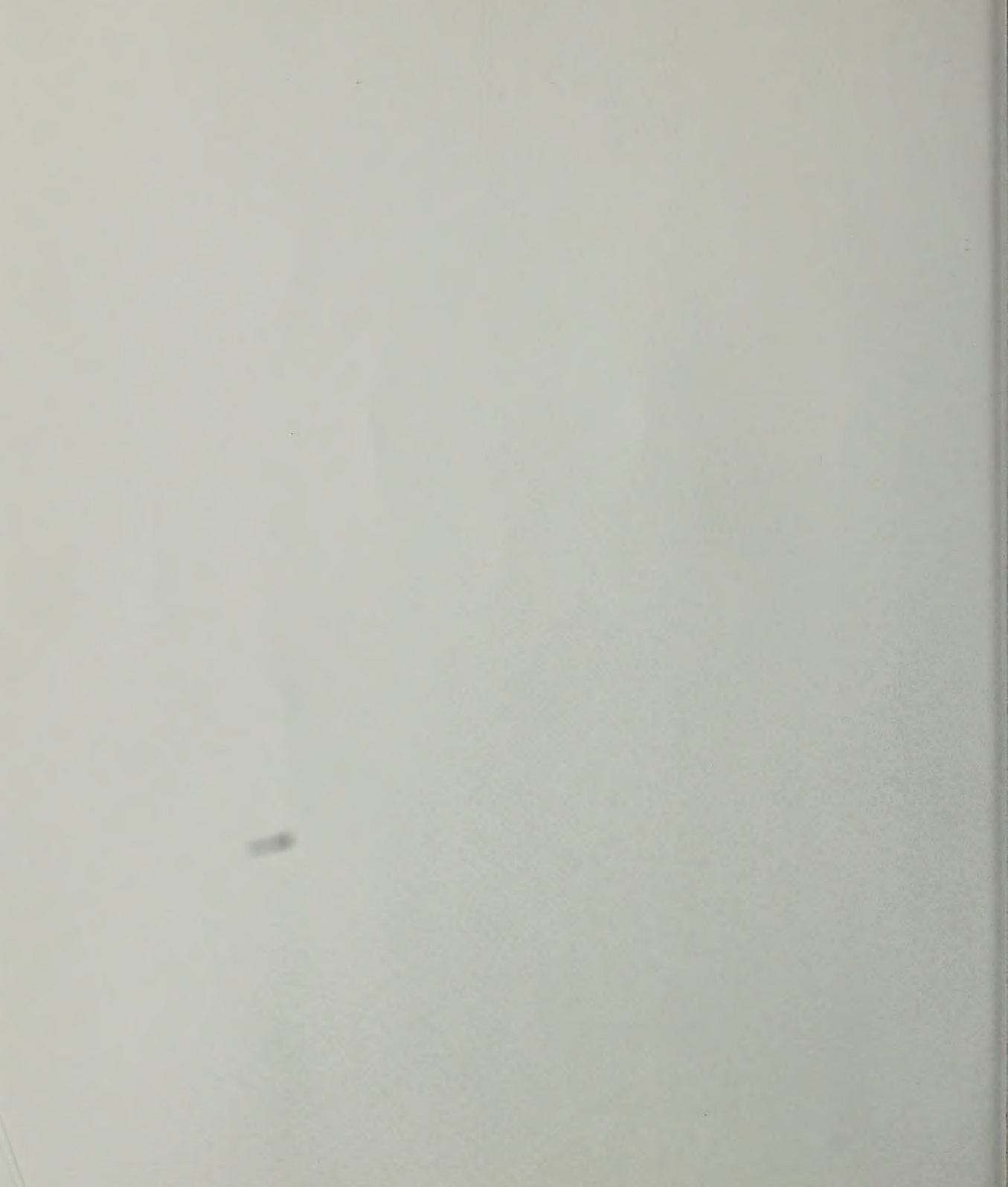


1987-88

Andover

Course of Study

Phillips Academy



Course of Study

1987-1988

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Course of Study

The curriculum of Phillips Academy comprises a required core of studies believed to be fundamental to a liberal education and elective courses designed to fit the special needs and interests of the individual student. Placement in the year-level of a subject may be independent of a student's grade in school; through advanced placement at entrance or accelerated courses, many students fulfill requirements ahead of the normal year, thereby gaining increased opportunity for college-level or other elective courses. Instruction is given in all subjects usually required for entrance to higher institutions.

Classroom groups are small enough to permit individual attention, and students are placed in sections fitted to their skill level. Accelerated sequences and advanced courses offer particularly able and well-prepared students opportunity to progress at a rate commensurate with their ability and ambition. Most departments offer courses beyond the level of preparation for college.

For full membership in a given class, students should have credit for the work of the lower classes or its equivalent. However, students are rated as members of a given class if their deficiencies for full membership in it do not exceed a certain number of trimester courses.

Every student is assigned to an Academic Advisor, who helps in the selection of courses that will meet Andover's diploma requirements, college entrance requirements, and the student's particular interests. Students should familiarize themselves with the Academy's basic curriculum—both its requirements and its flexibility.

Members of the Upper Middle and Senior classes should become aware of the entrance requirements of the colleges they may wish to enter.

The Trimester Plan

The academic year is separated into three trimesters. There are two types of weekly class schedules: one during which classes meet only Monday through Friday, and the other during which classes also meet on Saturday morning. There are roughly equal numbers of these five and six-day weeks in each trimester. Within a given week classes are scheduled to meet according to varying patterns:

some for four fifty-minute periods; others for five such periods; and a few seminar and studio courses for two two-hour blocks. Many departments offer yearlong courses as well as those which are term-contained (completed in one trimester). The diploma requirements are stated in terms of full-year courses or trimester courses, depending on the academic area involved.

Special courses in Foreign Languages

Special courses covering the work of two years in one are open to qualified Seniors in Chinese, German, Greek, Italian, Latin, Russian, and Spanish. These 10–20 courses are designed primarily for students of proven linguistic ability wishing to begin a second or third language in their Senior year, and therefore are not recommended for students of limited language ability. Entering Seniors with no previous foreign language experience must pass a 10–20 course as a diploma requirement.

Accelerated Sequences and Advanced Placement

The Andover curriculum offers accelerated sequences in most departments. It provides special programs in the modern foreign languages, designed to cover four years' work in three—or five years' work in four. The programs are open, on invitation of the departments, to especially able and ambitious students.

A large number of Phillips Academy students take College Board Advanced Placement Tests in May to establish advanced placement in college courses or credit toward the college degree.

Advanced Placement Examinations are offered in: American History, Art History, Biology, Chemistry, Computer Science, English, European History, French, German, Latin, Mathematics, Music, Physics, Spanish, and Studio Art (portfolio).

Independent Projects

With the approval of the Dean of Studies and in accordance with requirements established by the Faculty, a student may substitute independent work for some portion of the normal course load. An independent project may replace a given course for up to three trimesters of a student's stay at the Academy, or may replace all courses during a given trimester. In either case, the work is done

under the supervision of a member of the faculty.

Off-Campus Programs and Projects

The school offers several off-campus residential programs. The *Washington Intern Program*, in which Andover joins with Exeter, allows a group of Upper Middlers and Seniors to spend the Spring Term living together in Washington and working in the offices of U. S. Senators and Congressmen. (See *History 30*.)

Selected students enrolled in Spanish at the third level or higher may elect a residential Spring Term of study in Mexico (see *Spanish 35*), or a Winter Term in Barcelona, Spain, as part of an exchange program.

Selected students of French may participate in a Fall Term exchange in Paris, France, or may spend the Winter Term in Antibes, France, attending local schools and living with a family in the city.

There are also opportunities for students to spend a term living and studying in Italy or Germany.

In addition to school-sponsored programs, the trimester plan provides an opportunity for individual Seniors to arrange off-campus projects related to their special interests. Some Seniors have worked as interns with officials in local government and members of the Massachusetts legislature. Others have carried out projects in the arts under the supervision of professionals outside the faculty. Development of such projects depends upon individual initiative in the investigation of opportunities and careful planning of a course of study that will meet diploma requirements and also free a block of time during the appropriate term. Participation in any off-campus project or program must be approved by the Dean of Studies.

School Year Abroad

Students may elect to spend their Upper Middle or Senior Year studying in France or Spain with *School Year Abroad*, originated as an off-campus program by Andover, later joined as a sponsor by Exeter and St. Paul's. Students live with host families, while pursuing a course of study under the supervision of teachers from the three original sponsoring schools. Although *School Year Abroad* is now an independent program, it provides students with courses that earn full academic credit at Andover

and with the experience of immersion in a foreign culture. Students wishing to participate should consult their Academic Advisor and the *School Year Abroad* office (located in Samuel Phillips Hall on the Phillips Academy campus) for guidance in the selection of courses for the years prior to and following the year abroad.

The Mountain School Program

The Mountain School Program of Milton Academy is a semester-long program for eleventh graders which offers students the opportunity to enjoy a different living and learning experience on a 300 acre farm in Vermont. Phillips Academy students may participate Fall Term only. Students will continue their academic courses in addition to activities which will emphasize practical skills and crafts. Students will work on The Mountain School farm which supplies most of the food and heat for the school.

Summer Session

The *Andover Summer Session* is a six-week academic enrichment program for boys and girls of high school age. Students who wish to receive Phillips Academy credit for courses taken at the *Andover Summer Session* must receive prior approval from the chairman of the department involved.

Planning a Program of Studies at Andover

The following is designed to help Andover students and their parents to understand the curriculum, and to show the major decisions, and their consequences, which face students at each stage of the four-year academic program.

Workload

All new students are advised to carry only a normal program of five courses each term in the Junior, Lower Middle, and Upper Middle years. The requirement for the Senior year is four courses or the equivalent of the fourth course—that is, independent work equivalent to a course. Upper Middlers and Seniors may elect to adjust their workload by carrying four courses or five courses in any trimester during their last two years as long

as the total for the two years comes to twenty-seven trimester units.

In most courses, especially those taken to meet diploma requirements, class time and homework together can be expected to require a total of about 9 hours per week. Certain upper-level elective courses, as noted in their descriptions, may require more than the standard 4 to 5 hours of homework per week.

Academic Advising

Each student has an Academic Advisor; this member of the Faculty is responsible for counseling the student in the planning of his or her course of study at Andover. The Advisor meets with the student during the Orientation period prior to the opening of school in September to review the course selections which the student has made during the previous Summer or Spring. The Advisor must approve the selections for the Fall Trimester at this time, and those for the Winter and Spring Trimesters, respectively, during conferences held later in the year.

Within the diploma requirements, programs of study are determined by the student's long-range needs and aspirations—insofar as these can be identified. These needs may include college and career plans, strengths and weaknesses as revealed by previous performance and aptitude tests, and character and personal development.

In addition to the Academic Advisor, the House Counselor or Day Student Counselor must also approve the student's course selection for each trimester. From time to time during the academic year, the Counselor will report to parents concerning the student's growth and progress. Late each spring students in the three lower classes and their respective Academic Advisors will prepare a selection of courses for the coming year; a copy of this selection will be mailed to parents in June.

Although the student is ultimately responsible (within the Diploma Requirements and other guidelines and policies of the Faculty) for the selection of his or her courses, the Academic Advisor will welcome any information and suggestions that parents may wish to offer.

Diploma Requirements

The basic diploma requirement is the satisfactory

completion of a four-year secondary school program, of which at least three trimesters must be at Andover; the student must be in good standing (not on Probation or under Suspension) at the time of graduation. A student who has been dismissed is ineligible for a diploma unless readmitted.

A student's required program normally includes nine trimester credits in a foreign language, eight in mathematics, three trimester credits in United States History, plus an additional trimester course in history taken at the Upper Middle or Senior level, a full-year course in a laboratory science, (for Juniors entering in September 1987, and for all new students entering in September 1988 and thereafter, an additional three trimesters of science will be required), one trimester of art (usually *Visual Studies-Art 10*), one trimester of music (usually *The Nature of Music-Music 20*), and nine of English—these to include *English 10* (for ALL entering Juniors), a yearlong course of competence in writing and reading and a three-trimester sequence of general literature. In order to be eligible for a diploma all students must satisfy the swim requirement of the Department of Athletics. Certain diploma requirements vary with the class level at which the student enters Phillips Academy. Entering Juniors and Lower Middlers must pass *Physical Education 10* in addition to required athletics; all three and four-year students must pass, prior to graduation, a one-trimester course offered by the Department of Philosophy and Religious Studies. Entering Upper Middlers need pass only one trimester of either art or music at the Academy. Entering Seniors are not required to take either art or music. Some modifications of the language requirement are made for entering Upper Middlers and Seniors. Entering Seniors with no previous foreign language experience must pass a 10-20 course in a foreign language. A Senior must *earn* a minimum of twelve graded trimester credits during the Senior year. Seniors must have passing trimester grades for all courses taken during their Spring Trimester. Independent Projects are counted as graded courses.

Credits (trimester) required for the diploma are:

For Entering Juniors	54
For Entering Lower	51
For Entering Uppers	48
For Entering Seniors	48

Newly Admitted Students

Students entering for their first year are sent placement material, including some forms for present teachers to complete and a self-administered diagnostic test in elementary algebra. These items are used by the Academy to aid in proper placement or recommendation of course levels. New students are also asked to complete to the best of their ability a Course Selection form, indicating the courses that they wish to take during the coming year. Although the placement material may alter somewhat a student's preliminary selections, it is helpful, for planning purposes, to know the levels that each student thinks he or she is ready to enter.

The Main Choices at Each Stage of a Four-Year Program

While a student's program of studies is adapted each year to his changing situation, the *future consequences* of each course should be noted, for certain choices in one year open the way to later options and may close the door to others.

Academic Program Guidelines

In order to promote both breadth and depth in students' academic programs, the Faculty has voted the following guidelines, which are in addition to the Diploma Requirements listed above. These represent what the Faculty *strongly urges* students to do. The Academic Advisors recognize that there will always be some acceptable student programs which do not follow these guidelines.

All Juniors and Lowers should take English, mathematics, and foreign language every term.

By the end of Lower year each four-year student should have taken some history and some science.

By the end of Lower year each four-year student should have taken *Art 10* or *Art 11*.

All Uppers should take English all year.

In their Upper and Senior years students should take a total of at least four trimesters of mathematics and science, with at least one trimester in each of these two areas.

All Seniors should take, during each term, a course in which they do some writing in the English language.

All students will be advised to take some science in addition to the present one-year requirement.

All three and four-year students will be advised to take more than the minimum diploma requirements in the arts (Art, Music, Theatre and Dance).

JUNIOR YEAR

Each trimester a Junior must take five courses, only one of which may be a Pass/Fail course. Students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the spring.

In selecting courses, students are reminded to check the diploma requirements. A Junior's program should resemble the following outline:

1. Math—enter the sequence by placement of the department;
2. Foreign Language—begin sequence (usually a year-long course at the 10-level);
3. English—*English 10*
4. Elective [Art, Classics, Computer, History,
5. Elective [another Language, Music, Physical Education, RelPhil, Science, Study Skills, Theatre, Dance.]

LOWER MIDDLE YEAR

Each trimester a Lower Middler must take five courses, only one of which may be a Pass/Fail course. New students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the Spring. A few students take the CEEB Achievement Tests during the Lower Middle year. In selecting courses, students are reminded to check the diploma requirements. A Lower's program should resemble the following outline:

New Students

1. Math—(usually *Mathematics 19* or *Mathematics 21*);
2. Foreign Language—enter the sequence by placement of the department;
3. English—enter sequence (*Competence*);
4. Elective [Art, Classics, Computer, History,
5. Elective [another Math, another Language, Music, Physical Education, RelPhil, Science, Study Skills, Theatre, Dance.]

Returning Students

1. Math—continue the sequence (usually *Mathematics 21, 22, 32*);

2. Foreign Language—continue the sequence;
3. English—continue sequence (*Competence*);
4. Elective [Art, Classics, Computer, History,
5. Elective [another Math, another Language, Music, RelPhil, Science, Study Skills, Theatre, Dance.]

N.B.

Students planning to be off-campus for a term (e.g., *Term in Mexico*, *Washington Intern Program*, etc.) should avoid yearlong courses during that year. Students wishing to participate in the *School Year Abroad Program* during their Upper Middle year should discuss these plans with their Academic Advisor and seek guidance for the selection of courses for the Lower Middle Year. Participation in any off-campus project or program must be approved by the Dean of Studies.

UPPER MIDDLE YEAR

During the Upper Middle and the Senior Years, a student must accumulate a total of 27 trimester units in blocks of four or five courses per trimester. A Pass/Fail course may be elected as a fifth course only.

New students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the Spring. Many students take the CEEB Preliminary Scholastic Aptitude Tests in the Fall; all take the CEEB Scholastic Aptitude Tests in the Winter; and many take the CEEB Achievement Tests in the Spring of their Upper Middle year. Some also take the CEEB Advanced Placement Tests in the Spring of their Upper Middle Year. As a matter of general policy Academic Advisors encourage "depth" in the selection of courses for the Upper Middle Year. Many students satisfy their United States History requirement during their Upper Year. In selecting courses students are reminded to check the diploma requirements. An Upper's program should resemble the following outline:

New Students

1. Math—enter the sequence by placement of the department;
2. Foreign Language—enter the sequence by placement of the department;
3. English—begin sequence (*Competence*);

4. Elective [Art, Computer, History, another
5. Elective [Math, another Language, Music, RelPhil, Science, Study Skills, Psychology, Theatre, Dance.]

Returning Students

1. Math—continue the sequence (usually *Mathematics* 34, 35, 36);
2. Foreign Language—continue the sequence;
3. English—continue the sequence (usually *Lit B* (T2), *Lit C*);
4. History—usually *History* 30 (T2), 31 (*The United States*);
5. Elective [Art, Computer, another English, History, another Math, another Language, Music, RelPhil, Science, Study Skills, Psychology, Theatre, Dance.]

N.B.

Students wishing to take an *Off-Campus Independent Project* for a trimester of their Senior Year should avoid yearlong courses during their Senior Year. Participation in any off-campus project or program must be approved by the Dean of Studies.

SENIOR YEAR

During the Upper Middle Year and the Senior Year, a student must accumulate a total of 27 trimester units in blocks of four or five courses per trimester. A Pass/Fail course may be elected only as a fifth course; however, an Independent Project, though marked on a Pass/Fail basis, is counted as a graded course.

A Senior must *earn* a minimum of twelve graded trimester credits during the Senior Year. Seniors must have passing trimester grades for all courses taken during their Spring Trimester. Many Seniors retake the CEEB Scholastic Aptitude Tests in December and the CEEB Achievement Tests in January, and take the CEEB Advanced Placement Tests in May. In selecting courses students are reminded to check the diploma requirements. A Senior's program should resemble the following outline:

New Students

1. Math—enter the sequence by placement of the department; if the requirement is not yet satisfied enter *Mathematics* 40;

2. Foreign Language—enter the sequence by placement of the department if the requirement is not satisfied;
3. English—usually *English 300-12*;
4. Elective [Art, Computer, another English,
5. Elective [History, another Math, a 10-20 Language, Music, RelPhil, Science, Study Skills, Psychology, Theatre, Dance.]

Returning Students

Usually most diploma requirements have been satisfied. Careful selection of electives for continued depth in the student's chosen areas is encouraged.

Transferring and Dropping Courses

To transfer or drop a course, a student must obtain an official transfer slip from his or her Academic Advisor. This slip is then taken *as soon as possible* to the Scheduling Officer in George Washington Hall. Transfers into term-contained courses must take place during the first six calendar class days of the term. No course may be dropped after the end of the fourth week of classes of any term. Students wishing to drop yearlong or T2 courses prior to the normal end of the course, and after the first six calendar class days of the course, may do so only by gaining the approval of a group of five: the Department Chairman, the Dean of Studies, the student's House Counselor, Academic Advisor, and Instructor. Credit is granted at the discretion of the Department Chairman and only if the student is passing the course at the time it is dropped and only for that portion completed. Yearlong and T2 courses are considered as long-term commitments.

Attendance

Students are expected to attend all academic classes.

Instructors, if approached in advance, are permitted (but not required) to excuse students from a class meeting if the absence from that meeting will not add to weekend time. Only Cluster Deans may give permission to extend weekend time, and they may do so without consulting Instructors.

Failed Courses

In most cases, continuing students may attempt to

receive credit for a failed course by taking a make-up examination. Spring Term Senior Failures may be made up only following Commencement.

Personal Computers

Though there is no expectation that they do so, students are permitted to bring personal computers to the School and keep them in dormitory rooms (providing the monitor may not also be used as a television receiver). However, Phillips Academy can assume no responsibility for the care, security, or maintenance of these student-owned units. Further information concerning personal computers is available, upon request, from the office of the Dean of Residence.

College Entrance Examination Board Test Dates

Tests will be held on campus in 1987-88 as follows:

October 17	PSAT/NMSQT (<i>Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test</i>)
November 7	SAT/ACH
December 5	SAT/ACH
January 23	SAT/ACH
May 7	SAT/ACH
June 4	SAT/ACH
May 9-20	AP (<i>Advanced Placement Examinations</i>)

Key to Course Designation

A course number ending in "0" denotes a yearlong course (Example: *Math 10-0*). A number ending "123" indicates that the course is term-contained, but sequential, and may be taken for one, two, or three terms (Example: *Art 26-123*). A number ending in a single digit "1", "2", or "3" indicates a course, that is term-contained, but one that may be taken only once (Example: *Music 20-2*). The designations 1, 2, and 3 indicate the trimester during which the course is offered: 1 = Fall; 2 = Winter; 3 = Spring. Some courses require a two-term commitment; they are indicated by a "(T2)" following the course name (Example: *Physics 52-12 Advanced Physics (T2)*). Check carefully each course description for any other limitations: Prerequisites, permission of instructor or department chairman required, etc.

Immediately below each course number is a 4-

digit number in parentheses. This identification number (often referred to as the “computer number”) is used for data-processing files and is required when a student registers for courses. The final digit of the computer number has roughly the same meaning as the last digit of the course number:

Final Digit: Indicates:

- 0 Yearlong course
- 1 Course offered in Fall Trimester
- 2 Course offered in Winter Trimester
- 3 Course offered in Spring Trimester
- 4 T2 course offered in Fall and Winter
- 5 T2 course offered in Winter and Spring

Course Descriptions

Art

The diploma requirement in Art is as follows: entering Juniors and Lowers must take a trimester course in a Studio Art; an entering Upper must take a trimester course in a Studio Art or Music at the Academy; neither a Pass/Fail course nor an Art History Course is accepted as fulfilling the requirement. The basic course, *Visual Studies*, covers a broad range of material, is open to students of all abilities and experience, and is a prerequisite to almost all elective courses in Art. Exemption from this **prerequisite** is granted only on the basis of a portfolio of work judged satisfactory by the Chairman of the Department in collaboration with the teacher of the course which the student desires to enter. An acceptable portfolio should contain examples of two-dimensional work, three-dimensional work (slides or photographs are acceptable), and photography.

The College Entrance Examination Board offers students the opportunity to gain Advanced Placement in Studio Art in many colleges and Art Schools, thus enabling a student to by-pass basic design courses. Students must submit a portfolio of slides and original work to Princeton in May. Students interested in Advanced Placement should enroll in *Art 315-1* and two subsequent terms in Art.

Students wishing to apply for an independent project in photography will not be eligible until

they have taken *Art 12*, *Art 26*, and two terms of *Art 306*.

With the exception of *Art 40* and *41*, no Art course, if failed, can be made up by examination.

Students should expect to help pay for art materials.

Cameras are available for loan to scholarship students taking photography.

INTRODUCTORY STUDIO COURSES

10—1 Visual Studies

(0101) Five prepared class periods. Not recommended for Juniors. In its emphasis on visual observation, interpretation, and organization, the basic course is designed to provide an understanding of how visual information is made and transmitted. Along with discussion of design problems, the student receives experience

in photography, drawing, two-dimensional design, and three-dimensional construction. Previous experience in art is not required.

11—12 Visual Studies for Juniors (T2) (a two-term commitment)

(0114)
11—23 Four prepared periods. Strongly recommended for Juniors. This course introduces students to the language of vision through drawing, photography, video, color, structure, and two- and three-dimensional design. Studio projects are coordinated with visits to the Addison Gallery where students study original works of art that instruct and clarify their own art making activity. The course will fulfill the diploma requirement in art and will serve as the equivalent of *Art 10* as a **prerequisite** for other Art courses.

16—12 Extended Visual Studies (T2) (a two-term commitment)

(0164) In addition to the material covered in *Art 10*, this course includes video, art history, and 3-D design, with projects in woodworking and welding. Besides fulfilling the diploma requirement, it offers an optional prerequisite and expanded foundation for students intending to continue in advanced studio courses. Not open to juniors.

12—1 Introductory Photography

(0121) **Prerequisite:** *Visual Studies*. (*Art 10*, *11* or *16*)
12—2 An introduction to basic out-of-doors photography, the course covers fundamentals of exposure, developing and printmaking. A camera (35 mm. or 2 1/4) with manually controlled speed, aperture and focus is required;
(0122)
12—3
(0123)

a light meter is not necessary. (Scholarship students may borrow cameras from the school.) Emphasis is on both darkroom technique and aesthetic quality. This course may be bypassed by students with previous experience through the presentation of a portfolio. Classes meet twice a week with six hours of preparation and weekly conferences with the teacher.

14—1 Introductory Ceramics

(0141) Four classes per week plus evening studios.

14—2 Basic techniques of hand-building, wheel-throwing, and glazing. Emphasis on the

14—3 sculptural as well as the functional possibilities

(0143) of clay. At least one raku firing each term, or a similar special project. No prerequisites, and does not fulfill the diploma requirement.

15—3 Introductory Design

(0153) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).

A course designed for students who, having completed Art 10 or Art 11, would like to continue in an Art course less specialized than the other electives available in Art. This course continues the exploration of visual communication begun in *Visual Studies*, using a variety of media. Students work in several different forms of two- and three-dimensional art, exploring their relationships and developing some familiarity with the concepts dealt with in more specialized courses. Not open to Juniors.

INTERMEDIATE STUDIO COURSES

Unless otherwise noted, the intermediate courses consist of four prepared classes each week. *Visual Studies* (Art 10, 11, or 16) is a prerequisite for all intermediate courses. Any of these courses may be taken more than once to increase proficiency, as the courses are designed to deal with individual needs.

20—1 Drawing and Two-Dimensional Design

(0201) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).

A course designed to develop drawing and two-dimensional composition skills. Drawing includes: life drawing, still life, and mono-printing. Two-dimensional design will deal with the organization of representational images, color, painting and collage. Continuation in *Drawing* (Art 20-23) or *Two Dimensional Design* (Art 23-23) in Winter or Spring is recommended.

20—23 Drawing

(0202) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).

(0203) A course designed to develop observation and drawing skills in several media, based on the assumption that drawing is an end in itself as well as a skill basic to other media. Included: one life-drawing session each week. (Ms. Veenema and Mr. McMurray)

23—23 Two-Dimensional Design

(0232) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).

(0233) The course deals with one's ability to manipulate those elements most associated with the picture plane: color, line, shape, texture, and composition of flat materials. Work includes: 1) color—free studies and collages dealing with the structural and expressive nature of color; 2) drawing—exercises using pencil, pen, and brush, figure and landscape drawing; and 3) figure-ground—expanding the structural and illusionary aspects of figure-ground as an end in itself and as a basis for graphic and advertising design. (Mr. Shertzer)

24—23 Three-Dimensional Design (T2) (a two-term commitment)

(0245) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).

This course identifies some basic areas of concern—equilibrium, economy, function, scale—within an ecological frame of reference. Studio problems in design and construction will draw on the student's ability to learn and apply problem-solving techniques creatively; discussion and written exercises will ask the student to think about design as it defines the human enterprise. An introductory course in physics, chemistry or biology, taken previously or concurrently, will be helpful. (Mr. Lloyd)

26—123 Continuing Photography

(0261) **Prerequisite:** Art 12. An extension of *Intro-*

(0262) *ductory Photography*, the course goes deeper

(0263) into technical proficiency and aesthetic quality. Technical aspects include metering tech-

niques, black and white filters, exposure and printing contrast controls, various developing styles and darkroom deviations. A camera and light meter are required. The student will be exposed to the works of various photographers so that he may gain a better sense of his own photographic style and identity. Classes meet twice a week with six hours of preparation and weekly conferences with the teacher.

27—13 Animation

(0271) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).

(0273) An introduction to the art of illusion of motion through shooting still images frame by frame with 8mm sound motion picture film, with emphasis on making a very concise and carefully planned statement. Students may work in computer animation. (Mr. McMurray)

HISTORY OF ART COURSES

40—1 History of Art: Painting and Sculpture

(0401) Four prepared class periods. For Uppers and Seniors. Although a survey of Western Art from the cave painter to contemporary, the course examines four present-day directions by studying the historical styles as roots leading up to our time, with an emphasis on the 20th Century. (Mr. Bensley)

41—2 History of Art: Architecture

(0412) Four prepared class periods. For Uppers and Seniors. A survey of architecture and engineering from priestly civilizations to the present, the course emphasizes the architectural style as an expressive outgrowth of the culture that produced it. Combined with *Art 40-1*, this course should prepare students for the Advanced Placement Examination in Art History. (Mr. Bensley)

42—3 The American Renaissance: American Art 1876-1917

(0423) Open to all students. **Prerequisite:** *Art 40 or Art 41*, or permission of the instructor. A survey of American art produced between the Centennial Celebration of 1876 and World War I. The course will make extensive use of the Addison's collection, which is rich in this important period in American art. Discussion of art of the mid-century landscape traditions will serve as background for examination of such topics as the American Renaissance, Aestheticism, American Impressionism, and Social Realism. Artists and their work will be discussed within the historical, social, and cultural context that produced them. Lectures and class discussions will be coordinated with close study of works in the Addison's collection. (Ms. Olney)

ADVANCED STUDIO COURSES

Visual Studies (*Art 10, 11, or 16*) is a **prerequisite** for all advanced courses. These courses may be taken more than once. Unless otherwise noted, Advanced Studio courses meet four hours a week with four more hours required in the studio.

300—123 Graphics and Photography

(0701) **Prerequisite:** *Visual Studies* (*Art 10, 11, or 16*).
(0702) Applying photography to graphic arts, particularly through photo-silkscreen, photo-etching, computer graphics, and photo-lithography. Individual experimentation is emphasized in

an attempt to carry the expressive force of photography beyond darkroom techniques. (Mr. McMurray)

302—123 Painting

(0721) **Prerequisite:** *Visual Studies* (*Art 10, 11, or 16*).
(0722) An introduction to the basic elements and techniques of painting in oils. Specific problems are assigned to study the fundamentals of color, composition and space in painting, as well as to encourage the student's individual expression. Class critiques and discussions, slides, reproductions, and occasional field trips (depending on enrollment) are also part of the course. Previous experience is helpful but not necessary; students are encouraged to sign up for the full year if possible. (Ms. Spatz-Rabinowitz)

303—13 Filmmaking

(0731) **Prerequisite:** *Introductory Photography* (*Art 12*).
(0733) This course combines viewing theatrical, documentary, and art films for discussion and criticism with the production of individual and group projects using super-8 film and/or video equipment. Course work will include developing film ideas, script-writing, shooting, editing and class critiques. (Mr. Sheldon)

304—123 Advanced Ceramics

(0741) **Prerequisite:** *Visual Studies* (*Art 10, 11, or 16*).
(0742) For those who are seriously interested in the total operation from design to execution.
(0743) Hand-building, wheel-throwing, glazemaking (and some chemical analysis), responsibility for loading and firing electric, gas, raku, and salt kilns. Assigned reading and occasional field trips. Previous experience in clay is desirable. (Mrs. Bensley)

305—23 Graphics: Computer or Printmaking

(0752) **Prerequisite:** *Visual Studies* (*Art 10, 11, or 16*).
(0753) In the Winter Term this course will explore the major areas in the field of computer graphics: 2-D paint systems, 3-D graphics, and applications mixing photography, drawing, video and print with computer-generated and/or manipulated images. A series of small projects will cover the basics in each area. One major project follows, utilizing workstations which have image digitizing capacities and can output to slides, paper or video. Programming skills are not necessary, but students with programming experience will be encouraged to use it in accomplishing their final project.

In the Spring Term the course aims to give a student knowledge of different drawing techniques using printmaking media. If they wish, students can use computer generated images in their work. Students work with metal plate etching and dry point, collagraph and plate

lithography. Printmaking allows students to see the successive conceptual stages an artist goes through in developing an image and encourages them to look at the many possible forms their images could take rather than focusing on one final product. (Mr. Sheldon, Ms. Veenema)

306 Advanced Photography

Prerequisites: *Continuing Photography (Art 12)* and *Intermediate Photography (Art 26)*.

306-I-13 Photojournalism. A photograph is a multi-dimensional experience. It can serve to recall persons or events; it can inform, inspire, and raise questions. It is a way of sharing an experience and one's relationship to it. The subject of this course is taking photographs that are deeply and personally felt and which, at the same time, can communicate to a wide audience. The commentary and images of several celebrated photographers will be presented for discussion. Projects will include individual photographs, essays, picture stories, journals, biographies, etc. While independent work is expected, some assignments will be given. (Mr. Wicks)

306-II-12 Photographing Ideas. Concentration in this course will be on photographs that are visualizations of ideas and concepts. A variety of techniques will be discussed and demonstrated, including negative manipulation, collage, and mark-making on the print itself. In addition, the course will survey the work of contemporary photographers working in this idiom. Students will be expected to produce sufficient work to meet the demands of a bi-weekly critique. (Mr. Baden)

306-III-2 Studio Photography. Concentrating on portraiture and fashion photography, studio strobes are used to achieve controlled lighting. Through various darkroom techniques and manipulation, along with individual experimentation, an attempt will be made to express personal ideas. Utilizing professional models from Boston agencies, the course is an introduction to commercial photography. (Mr. Bensley)

306-IV-3 Photoillustration. Communication of thoughts, feelings, and dreams in an imaginative and personal manner is the main goal of photoillustration. Through various darkroom techniques and manipulation, along with individual experimentation, an attempt will be made to express personal ideas. Initial projects will be assigned to enhance experimentation and problem-solving, followed by indepen-

dent work to be presented sequentially in book format. The course includes group critiques and discussion of works by several photographers. (Ms. McCarthy)

308-123 Sculpture

(0881) **Prerequisite:** *Visual Studies (Art 10, 11, or 16)*.
(0882) Offers an opportunity to work in practically
(0883) every material available to the sculptor today, including wood, stone, metal, plastics, plaster, and others. It is therefore possible for students to develop into sculpture concepts discovered in *Visual Studies (Art 10)* or *Three-Dimensional Design (Art 24)* as well as ideas drawn from their own experience. Some outstanding work of recent classes includes the "avocado" by Seymour House '73, a thirty-foot welded construction which is now a permanent addition to the Underwood courtyard. Individual criticism is stressed. (Mr. Shertzer)

309-3 Kinetics

(0893) **Prerequisite:** *Visual Studies (Art 10, 11, or 16)*.
A search for the aesthetics of movement. Individual inventiveness is stressed as students pursue projects directed toward devices that produce implied or real motion. Self-perpetuated problem-solving situations become one of the prime values and objectives of the course. Projects range from simple mobiles and mechanical sculptures to computer graphics. (Mr. McMurray)

310-123 Architecture

(0901) **Prerequisite:** *Visual Studies (Art 10, 11, or 16)*.
(0902) For Uppers and Seniors. *Three-Dimensional Design (Art 24)* recommended, but not required. The design of structures for human habitation involves a variety of basic considerations. In the fall, the course will concentrate on functional analysis of sheltered spaces and their organization. The winter term will survey methods of enclosing spaces at different scales and construction techniques, including some architectural detailing. The spring term will combine knowledge gained in the previous terms in a project or projects simulating the experience of architectural practice. The course fills the needs of students who are considering architecture as a field of concentration as well as of those who desire familiarity with the basics of environmental design. Although students are encouraged to take the course for three terms, each segment is planned to accommodate enrollment for that term alone. (Mr. Lloyd)

311-3 Contemporary Communications

(0913) Four prepared class periods. The course examines some of the bases of communication

between and among people. Material includes fiction, non-fiction, poetry, drama, motion pictures, and the visual arts. **Prerequisites:** Successful completion of a course in art, music, or theatre. The course engages in group projects aimed at public presentation. (Mr. Owen, Mr. Lloyd)

314—3 Calligraphy: The Art of Lettering by Hand
(0943) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).

Four prepared class periods. A course designed to develop basic techniques of fine hand lettering beginning with Roman capitals and tracing the historical developments of letter construction, integrating form and function. Practical applications can range from simple matter quotations to illuminated manuscript work. Applications of computer graphics are explored. (Mrs. Quattlebaum)

315—1 Advanced Placement in Studio Art

(0951) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16)

and two art courses. For Seniors who have taken at least two art courses beyond *Visual Studies*. This course is a seminar run via weekly critique sessions with instructor, and in which each student is expected to do at least nine hours of outside, independent work in preparation of her or his portfolio for Advanced Placement or for other use. A student enrolled in this course should plan to take at least one art course or project in Winter and Spring Terms. (Ms. Veenema)

Classical Studies

The Department of Classics offers the following courses in Classical Studies designed to provide Andover students a broad introduction to Classical Civilization through history, literature mythology, and etymology. All courses are electives, open to the various classes as noted. The courses offered here require no knowledge of Greek or Latin. Courses in the Greek and Latin languages offered by the Department of Classics are described under Foreign Languages. For another course in Ancient History see *History* 55--123.

21—1 Classical Civilization: Greece

(5321) Four prepared class periods. For Juniors and

21—3 Lower Middlers. The course surveys the achievements of the ancient Greeks from Homeric times through Alexander the

Great, including their impact on later civilizations in such areas as literature, art, philosophy, drama, government and science.

22—2 Classical Civilization: Rome

(5332) Four prepared class periods. For Juniors and lower Middlers. The course introduces students to the civilization of Rome which dominated the Western World politically for a thousand years and culturally for even longer. The developing concepts of politics, law, and empire as we know them today are discussed. The course challenges the students to consider the meaning of the Roman experience in its glorious achievement of the "Roman Peace" as well as in its "Decline and Fall."

31—1 Etymology

(5411) Four prepared class periods. For all classes.

31—2 Training in the interpretation of English words by systematic analysis of elements derived from Greek, Latin and other Indo-European languages.

31—3 Exercises expand vocabulary and develop precision of expression and understanding. (5413)

32—1 Greek Literature

(5421) Four prepared class periods. Open to all

32—2 classes. A systematic study of the masterpieces of early European civilization as seen in their proper literary, intellectual, and historical context. In what is essentially a history of ideas, the major *genres* of epic, tragedy, comedy, satire, history, erotic poetry, and philosophy are stressed as aspects of the wider evolution of early European thought which laid the basis for modern civilization. The major problems which still confront human life are explored through the writings of Homer, Aeschylus, Sophocles, Euripides, Herodotus, Thucydides, Aristophanes, Plato and others. (Dr. Pottle)

33—2 Classical Mythology

(5432) Four prepared class periods. Open to all

33—3 classes. The interest of the Twentieth Century in Classical Mythology has stemmed from three main sources: the psychoanalytical use of myth, progress in the field of classical archaeology, and anthropological study of myth.

Preliminary exploration of the works of Freud in psychology, Schliemann and Evans in archaeology, and Frazer, Graves, and Levi-Strauss in anthropology leads to the detailed study of the myths of Oedipus, Theseus, and Agamemnon among others. The myths are considered living entities changing in the hands of each artist who deals with them whether it be Homer or Joyce, Aeschylus or O'Neill, an anonymous Greek vase painter or Dali, Euripides or Strauss. Works of literature, art, and music provide the core for the study of the use of myth in human life. (Mr. Krumpe)

English

The diploma requirements in English are to establish competence in writing and reading (normally by successful completion of the *Competence Course*), and to complete the *Literature Sequence* through *Literature C*. For those entering Seniors and Post-Graduates who must take *English 300*, the requirement is reduced by the appropriate number of trimesters. (Seniors and Post-Graduates are interviewed by the Department Chairman before the start of school and in some cases these students may be exempted from *English 300* to enroll in one of the 400 or 500 level English courses.) All new Lowers and Uppers enroll in *Competence*. Students entering the Junior Class must take *English 10*. Juniors may not enroll in *Competence*.

The English Department also offers specialized courses for students who have already passed their competence and literature requirements and elect to continue studying English. Related courses, whose prerequisites vary, are listed elsewhere in this booklet: e.g., under Performing Arts, Interdisciplinary Courses, Classics Courses, and Modern Foreign Language Courses in translation. *All English courses meet for four prepared classes a week, unless the course description states otherwise. No failed course may be made up simply by passing a make-up examination.*

10—0 English

(1100) This course is required for all Juniors. As a foundation for the *Literature Sequence*, the course studies a variety of literary forms and styles. Frequent writing assignments, close reading of such texts as *The Odyssey*, *Great Expectations*, *Black Boy*, *The Tempest* and regular work with journal entries prepare the student for the *Competence* course in the tenth grade.

Juniors are also eligible to enroll in Etymology, which is described under Classics.

Normal Required Sequence (2 years)

(For Lowers and entering Uppers only)

Fall	Winter	Spring
	Competence	
Lit B (T2)		Lit C

First year of sequence
Second year

(1200) Competence Course

The course is designed to teach basic skills in reading and writing. It enables a student to achieve the competence requisite for the literature sequence and the specialized courses. The course is concerned with the recognition and use of the basic elements of a sentence, sentence patterns, punctuation, paragraph development and coherence, and the composition of unified exposition. The first term emphasizes writing paragraphs and short compositions; the second term includes multi-paragraph compositions and the documented report. The third term focuses on close and accurate reading of the short story and the poem and helps students develop the skill necessary to write about these works clearly and concisely. *Competence* also encourages the acquisition of important reading skills in conjunction with the study of writing. Passages composed by skillful writers are evaluated for organization, logic, point of view, tone, diction, transitional devices. Through the use of the summary sentence, the outline, and the summary paragraph, a student learns to reduce a passage to core ideas. Texts: *English Competence Handbook*; *Writing With a Point*; *Combinations for Competence*; *The Modern Tradition*, ed. Howard; *The Norton Anthology of Poetry*.

LITERATURE SEQUENCE

Lit B (T2) (a two-term commitment)

Lit B continues the shift in emphasis, begun in the third term of *Competence*, away from basic writing training to reading and writing about literature. Here students will choose a course centered in one of three modes: Satiric, Tragic, or Mythic. Though the modes differ, the objectives of *Lit B* are common to all three: to develop the skills of literary analysis; to teach a sense of literary mode; to develop a sense of historical perspective; to teach the forms of the novel, the poem, the play; to develop a literary sensibility; and to apply analytical skills to the writing of papers.

(1224) Lit B—I (The Satiric View)

A study of verse and prose works that illustrate the nature, purposes, and techniques of satiric writings. Core Texts:

FALL TERM — *Huckleberry Finn*
Gulliver's Travels

Satire: From Aesop to Buchwald

WINTER TERM — *Nineteen Eighty-four*

Canterbury Tales

poetry from *Satire: From Aesop to Buchwald*

The Best of Simple

(1234) Lit B—II (The Tragic View)

The course studies the tragic elements in poetry, plays, novels and short stories representing a variety of cultures and periods ranging from Sophocles' Athens to Hawthorne's New England to Marshall's Jamaica. Frequent essays will emphasize thoughtful reading and critical writing. The core texts follow:

- FALL TERM — Drama by Sophocles
 Wuthering Heights or *Frankenstein*
 Drama by Ibsen
 Poems by Keats, Shakespeare, Yeats, Dickinson
 A work by Erdrich, Jones, Wright, Marshall or Hurston
- WINTER TERM — A work by Hardy or Hawthorne
 Heart of Darkness
 Poems by Frost, Eliot, Kunitz, Olds, Lowell, Bishop, Hayden, Vallejo, Neruda; Anthologies of black and native American poetry: Morrison, Gordimer, Silko, Ellison, Kingston or Wideman

Other works may include Marlowe, O'Neill, Wharton, Miller, Tolstoy, Melville, Bellow, Dante, Fugard, O'Connor, James, Fitzgerald, Carver. Additional poets ranging from Coleridge to James Wright may also appear in the course.

(1244) Lit B—III (The Mythic View)

The course explores mythic elements in a wide variety of works with the aim of developing a student's ability to respond to and write about literature. Texts should include:

- FALL TERM — *The Bible* (selections)
 The Oedipus Cycle
 A Native American Creation Myth
 Heart of Darkness
 Song of Solomon
 Grimms' Fairy Tales
 Selected Poetry
- WINTER TERM — *Moby Dick*
 Huckleberry Finn
 Selected Poetry
 A work from an ethnic American background

(1263) Lit C

An introduction to the study of Shakespeare. At least three plays will be read, one being *Hamlet*, with an emphasis upon close textual analysis.

SPECIALIZED COURSES

Specialized Courses are open to students who have successfully completed *Competence, Literature B* and *C*. Courses numbered in the 500s are more intensive and demanding than those numbered in the 300s and 400s and may require more than the standard 4 to 5 hours per week of homework. Each course has four prepared class periods a week, unless specifically stated otherwise. Only courses with sufficient enrollment will be given.

300—12 English

- (1301) A special course for all post-graduates and
 (1302) one-year Seniors. Its purpose is to provide the writing and reading skills taught in *Competence* as well as to expose students to substantial works of literature. While reading plays, poetry, short stories, or novels, students undertake intensive writing exercises and learn to write effective papers of greater length. (Mr. McGraw, Mr. Smith)

401—123 Non-Fiction Writing

- (1711) In this course writers will gain practice in
 (1712) these non-fiction modes: personal essay,
 (1713) analysis, argument, feature writing, and extended composition. There are daily writing assignments; class work focuses on student editing. The instructors assume that students entering the course write with grammatical and rhetorical competence. Students are encouraged to submit their work for publication in newspapers and magazines. (Mr. Gould)

403—123 Introduction to Writing

- (1731) An introductory course to the writing of
 (1732) original stories, informal essays, and poetry.
 (1733) While examining examples of the genres mentioned, the student tries all these forms. With written permission from the department chairman, a student may take this course before he has completed the normal Competence-Literature sequence. (Mr. Owen)

405—123 Literature of Two Faces

- (1751) The relationship between American and minority cultures. The course addresses one or
 (1752) two cultures in any given term. The instructors hope to introduce students to the myth,
 (1753) magic and hard realities of ethnic experience in this

country. Authors students might read include Flannery O'Connor, James Baldwin, Gwendolyn Brooks, Leslie Marmon Silko, William Faulkner, June Jordan, N. Scott Momaday, Issac Bashevis Singer, Sonia Sanchez, Imamu Amiri Baraka and Maxine Hong Kingston. (Ms. Moss, Mr. Thorn)

407—123 British Writers

(1771) Through a selection of British poems, plays, (1772) and novels spanning several centuries, students will become acquainted with important themes and techniques of the great English literary tradition. Representative authors include Chaucer, Spenser, Milton, Pope, Fielding, Johnson, Wordsworth, Austen, Keats, the Brontes, Dickens, Tennyson, Hardy, Lawrence, Joyce, Woolf and Greene. (Ms. Fan, Mr. Gilbert, Mr. Joel, Mr. Thorn, Dr. Enemark)

408—123 American Writers

(1781) A thematic and comparative study of the (1782) novel, drama, and poetry in America from (1783) 1850 to the present. Representative authors are Hawthorne, James, Wolfe, O'Neill, Fitzgerald, Dos Passos, Hemingway, Williams, Faulkner, West, Styron, Agee, Cather, Wharton, Whitman, Frost, Cummings. (Mr. Cobb, Mr. Bardo, Mr. Bernieri, Ms. Moss, Mr. Price)

ALL OF THE FOLLOWING COURSES MAY REQUIRE MORE THAN THE STANDARD 4 TO 5 HOURS PER WEEK OF HOMEWORK.

500—23 James Joyce

(1802) The first term is devoted to *Dubliners*, *A Portrait of the Artist*, and *Stephen Hero*, and Ellmann's *James Joyce*; the second to *Ulysses* and *Finnegans Wake* in part. The purpose of the course is to follow the development of Joyce's method and style and to develop the skill to read important and difficult works without the aid of study guides and other secondary material beyond the Ellmann. Although the course may be taken in either term, the student gains a better sense of Joyce's genius by enrolling for two terms. (Dr. Germain)

502—12 Irish Literature

(1821) The course will begin with a brief examination of Irish history and Celtic mythology in order to broaden our appreciation and understanding of the four major writers of the Irish Renaissance: Yeats, Joyce, Synge, and O'Casey. Throughout the term we will try to draw connections between Irish politics and literature, both during the Literary Revival and today, in Northern Ireland, where "the troubles" persist. (Ms. Stephens)

504—123 Man and God

(1841) The course considers man's search for meaning in what frequently seems to be an inexplicable world. Readings include: *King Lear*, Shakespeare; *As I Lay Dying*, Faulkner; *Long Day's Journey into Night*, O'Neill; *The Plague*, Camus; *The Fixer*, Malamud; *Notes from the Underground*, Dostoevski; *The Trial*, Kafka; *Wise Blood*, O'Connor; *Nine Stories*, Salinger; *The Birthday Party*, Pinter; *Alice in Wonderland*, Carroll; *Zorba the Greek*, Kazantzakis; *The Bluest Eye*, Morrison. (Miss St. Pierre)

508—23 Directions in 20th Century Drama

(1882) The close study of significant contemporary drama. The winter term focuses on the first half of the 20th Century and plays by Shaw, Chekov, Strindberg, O'Casey, Brecht, Pirandello, and Ionesco are read; the spring term starts with Beckett, and includes plays by Williams, Bolt, Pinter, Albee, Stoppard, and Shepard. (Ms. Braverman, Mr. Owen)

509—1 Shakespeare: The Man, The Times, The Theatre, The Plays

(1891) The course focuses on six plays (representative histories, tragedies, and comedies), and the sonnets, as well as some biographical and historical readings. (Mr. Stephens)

510—123 The Short Novel

(1901) An examination of the novella, and the (1902) genre of the short story with concentration (1903) on some fifteen works of comparative literature, including, Chekov's *Ward No. 6*; Mann's *Death In Venice*; Lawrence's *The Fox*; Tolstoy's *The Kreutzer Sonata*; James' *The Beast in the Jungle*; Stendhal's *The Cenci*; Greene's *The Third Man*; Melville's *Billy Budd*; Stevenson's *Dr. Jekyll and Mr. Hyde*. (Mr. Pfeffer, Dr. Enemark, Mr. Gilbert)

512—123 Satire and Comedy

(1921) A study of both the theories and practice of (1922) satire and comedy, with emphases on the (1923) eighteenth century and the modern period. Works by authors like Pope, Swift, Sterne, Ben Jonson, Waugh, and Heller will be studied in conjunction with the visual art of Hogarth and Steinberg, and recordings of modern performers like Peter Cook, Dudley Moore, Mel Brooks, and Peter Sellers. (Mr. Regan)

513—123 Novel & Drama Seminar

(1931) The course concentrates on major works of (1932) literature since 1880, primarily on the works (1933) of Virginia Woolf, Henry James, David Storey, Franz Kafka, Flannery O'Connor,

T.S. Eliot, Samuel Beckett, Eugene O'Neill, William Faulkner, Gunter Grass, Saul Bellow, Gabriel Garcia Marquez, Grace Paley, John Barth, Isaac Bashevis Singer, Robert Stone, Elie Weisel, Harold Pinter, Bertolt Brecht, and Vladimir Nabokov. Students study the "world" of each writer and compare it with that of the others. As a basis for the comparison with the classics of the past, they also study a Greek Tragedy and *The Brothers Karamazov*. Class periods are devoted to seminar discussions (often led by students) and critiques of student writing. Students regularly stage dramatic readings, cast and performed by the class. (Mr. Wise)

514—123 Creative Writing

(1941) A writing course in poetry and short fiction
(1942) and the personal essay. Students may be
(1943) asked to keep journals or to do short reading assignments, but the primary emphasis is on the body of work the student creates during the term. Content varies from term to term according to the instructor. (Mr. Gould and writer-in-residence)

515—123 Literature of the Quest

(1951) Focusing on the ancient pattern of the journey, the thresholds crossed and the vision
(1952) obtained, the course asks students to interpret elements of the quest from a variety of
(1953) perspectives. In the Fall Term readings include Socrates' *Euthyphro* and *Oedipus Rex*, the Abraham cycle, Beckett's *Waiting for Godot*, and Eliot's *The Waste Land*. The Winter Term considers the suffering encountered on the quest and explores themes from the gospel of Mark, *King Lear*, *The Great Gatsby*, Wiesel's *Night*, West's *Miss Lonelyhearts* and Flannery O'Connor's *Everything That Rises Must Converge*. The Spring Term questions the journey's end, reading the Amor and Psyche myth and *Alice in Wonderland*, comparing Jacob and Jesus and ending with two tragicomedies: *The Tempest* and *Who's Afraid of Virginia Woolf?* (Mr. Zaeder)

518—3 Spenser and Milton

(1963) Students read minor works of both authors as well as Spenser's *The Faerie Queene* (Books I-II) and Milton's *Paradise Lost*. (Mr. Kalkstein)

520—123 Images of Woman

(1971) This course will examine, through the study
(1972) of literature, woman as she perceives herself
(1973) and as she is perceived by others. It will explore works by both men and women writers and will focus on the constant and the changing image of woman in different literary periods. Readings will include: *Northanger Abbey*, Austen; *Jane Eyre*, Bronte; *Hedda Gabler*, Ibsen; *Measure for Measure*, Shakespeare;

The French Lieutenant's Woman, Fowles; *The Awakening*, Chopin; *The Mill on the Floss*, Eliot; *The Scarlet Letter*, Hawthorne; *Surfacing*, Atwood; *A Room of One's Own*, Woolf; *Diving Into The Wreck*, Rich; *Song of Solomon*, Morrison; *Tell Me a Riddle*, Olsen; *As I Lay Dying*, Faulkner. (Ms. Fan, Ms. Braverman, Ms. Graham, Ms. Harper)

527—3 Chaucer and His Age

(1983) The sophisticated ingenuousness of the Middle Ages as seen in works by two of its greatest practitioners, Chaucer and the *Gawain*-poet. The focus of the course is a study of *The Canterbury Tales* in Middle English. *Sir Gawain and the Green Knight* will be read in translation. (Mr. Wilkin)

528—2 Studies in Literature

(1992) '*A Hard Rain's A-Gonna Fall*': Vietnam's Influence on American Literature and Cinema.

This course will offer through literature and cinema selected glimpses of how the Vietnam War deeply influenced our culture, especially from 1960-1975.

Feature films (such as *The Deer Hunter*, *Bonnie and Clyde*, *Coming Home*, *The Killing Fields*) will be an important focus. Documentaries will also be shown. The course's reading list will embrace a wide range of material and genres. Poetry, plays, song lyrics (particularly the work of Bob Dylan), memoirs, essays, and novels shall be the foundation of class discussions.

Students will be required to keep an extensive journal, as well as present a research paper.

Readings include: *Vietnam Voices*, Pratt; *In-Country*, Mason; *A Rumor of War*, Caputo; *Born on the Fourth of July*, Kovic; *Carrying the Darkness*, Ehrhart; *Dispatches*, Herr; *One Flew Over the Cuckoo's Nest*, Kesey; *Coming to Terms* (plays); *De Mojo Blues*, A.R. Flowers. (Mr. Bardo)

The following Theatre courses, which are related to English studies, have no prerequisites: **Theatre 22 (Public Speaking)**, **Theatre 28 (Shakespearean Workshop)**, and **Theatre 53 (Playwriting)**. Other courses related to English are **Art 311 (Contemporary Communications)**, **History 66 (The Renaissance)**, and, in the Study Skills section, **Basic Study Skills**, **Language Skills I & II**, and **Efficient Reading Skills**.

Foreign Languages

Andover's requirement of at least three high school years of an ancient or modern language rests on the firm belief that direct acquaintance, through language, with the spirit and people of other lands is a psychological and intellectual re-

source of inestimable value for each individual, for every country, and for our common world.

The diploma requirement is satisfied by completion of three trimesters at the 30-level reached through the regular sequence, or by one trimester of 40-level reached through the accelerated sequence. Placement of new students is based on their previous school record, on the questionnaire sent to them and their current language teachers in the Spring, and, when appropriate, on a personal interview with the language chairman at Andover. Details regarding various options and the diploma requirement as it is applicable to "incoming Uppers and Seniors who begin a new language at Andover" are available from the Registrar's Office.

With the exception of Italian (limited to Seniors), each of our languages, ancient and modern, may appropriately be started by students of any grade, Juniors (9th) through Seniors. Most Andover students continue their language study beyond the third year. Some study a second language in addition.

Small classes, flexible placement, and opportunities for acceleration assure that each student is in the optimum learning situation. In the case of modern languages, the foreign language is the language of the classroom. In conversation, in reading, and in writing, the goal is direct communication in the foreign language rather than through translation. The classroom experience is expanded by the language laboratory; media resources (e.g., periodicals, radio broadcasts, videotapes, movies); the staging of plays; club activities; language events and programs at Andover or nearby schools. At all levels of instruction attention is focused both on basic language skills and, increasingly, on the literature, history, and various art forms which reveal the people whose languages are being studied. For information on School Year Abroad and other opportunities to study abroad, students should see their language instructor or the Chair of the Language Division.

Chinese

Although the Chinese language may appear mysterious to Western eyes and ears, it is actually no more difficult than any other to speak. With no

conjugations, verb tenses or declensions there are some aspects which actually make it easier. To learn Chinese is to open a bridge to the Orient. Mandarin Chinese is the language of instruction. Emphasis in early courses is on listening and speaking skills. As more and more characters are assimilated the emphasis shifts to include reading and writing. Traditional texts are complemented by contemporary newspapers. Extensive use is made both of the language laboratory and of audio-visual material. Opportunity is available for qualified students to participate in our six-week study-travel summer exchange program in Harbin, China.

10—0 Beginning Chinese

(4410) Five prepared class periods. An introduction to modern spoken and written Chinese, stressing pronunciation and aural-oral facility, and including the reading and writing of characters.

10-20—0 Accelerated First and Second-Level Chinese

(4420) Five prepared class periods. Open to Seniors, and to Uppers with permission. An intensive yearlong course covering the essential material of both *Chinese 10* and *Chinese 20*.

20—0 Second-Level Chinese

(4440) Five prepared class periods. Emphasizes further development of aural-oral skills, making use of student-written dialogues and skits. Characters are introduced at a faster pace, and the basic text is supplemented by a character reader.

22—0 Accelerated Second-Level Chinese

(4450) Five prepared class periods. Placement is made by permission of the department. Upon successful completion of this course, students move directly to Fourth-Level Chinese.

30—0 Third-Level Chinese

(4460) Four prepared class periods. More emphasis on reading comprehension, with discussion stemming from the readings. Basic text supplemented by graded readers on the lives of the philosophers Confucius and Mencius, the poets LiPo and TuFu, and the father of modern China, Sun-Yat-sen.

40—0 Fourth-Level Chinese

(4490) Four prepared class periods. Readings, in both traditional and simplified characters, are selected to stimulate interest in Chinese culture, ancient and modern. Topics in history, literature, and cur-

rent events will serve as a basis for discussions and short compositions.

French

The French Department offers a six-year course of study. At all levels French is the language of the classroom, and in all courses the French Language is taught in a cultural context. The first two years emphasize basic language structures. The third year serves as a transition to advanced courses which offer in-depth study of the literature and civilization of the French-speaking world. Students are encouraged to supplement classroom study with travel and study in France and other French-speaking countries through participation in programs such as School Year Abroad, the Antibes and Paris exchange programs, a class trip to Québec (*French 45-3*), and summer programs. Information on these programs may be obtained from the Modern Language Office.

10—0 Première année

(4010) First-year French for students who have had no previous courses in the language. Five prepared class periods. Listening comprehension and the use of basic conversation patterns of French speech are emphasized. Elementary grammatical and idiomatic structures are introduced as well as appropriate reading material. Students make use of the language laboratory.

11—0 Premier niveau

(4030) First level French. Five prepared class periods. This course is designed for the student who has had previous instruction in the language, but whose knowledge and skills are not secure enough for entrance to a second-level section. It is also appropriate for students with experience in other languages who wish to begin the study of French. The course emphasizes the development of oral-aural skills and prepares for *French 21* the following year. Students who demonstrate unusual aptitude and interest are invited to enter *French 22*, the second level accelerated course.

21—0 Deuxième niveau

(4060) Second level French. Five prepared class periods. For students who have completed *French 10* or *French 11* and for new students who qualify through teacher recommendations or placement examination. While continuing to develop aural-oral skills, the course involves reading non-technical French prose and

writing simple compositions. Text: *Encore Une Fois*, Herbst, Sturges.

22—0 Cours accéléré. Deuxième niveau

(4070) Accelerated second level French. Five prepared class periods. Upon successful completion of this course, students are recommended either for fourth level or for two trimesters of the third level sequence to be followed by a single-trimester fourth level course. Text: *La Grammaire à L'Oeuvre*, Barson. *Le Petit Nicolas*, Goscinnny.

Third-Level Courses

A two-trimester departmental Conversation and Composition course is followed by a trimester course which creates a transition to more specialized studies.

Conversation et Composition

Four prepared class periods. Students gain practice in conversation and composition in a course which stresses the development of all four basic language skills: listening, speaking, reading, writing. The focus of the course may be chosen between the following options.

30—12 Conversation et Composition: Réalités. (T2) (4094) (a two-term commitment).

Activities and discussion spring from authentic documents of everyday life, from tickets and schedules to magazine articles. Emphasis will be placed on writing for practical purposes.

31—12 Conversation et Composition: Fictions. (T2) (4104) (a two term commitment).

Provocative short works of fiction are the starting points for discussions and for assignments in imaginative writing.

Cours spécialisé

Four prepared class periods. Each third trimester course involves learning about a particular subject in French, with language review supplied as needed. Whereas any one of the seven courses offered below could fulfill course objectives for all students, the Department prefers to offer variety, with the understanding that student choice can be accommodated only to the extent that overall enrollment permits.

32—3 Le village français

(4113) Using, as points of departure, the impressions and misimpressions which French and Americans have of each other's culture, this course attempts to give the student a better understanding of the French people and their institutions as reflected in the microcosm of a town. With the student's hometown as a

basis of comparison, several French towns are examined in depth, including the provençal towns of Roussillon and Cassis and a town of the student's own choice. The basic text, Wylie, *Village en Vaucluse*, is complemented by readings, lectures, original documents, and both national and regional newspapers and magazine articles.

34—3 Le roman

(4133) A particular novel is read and discussed during the term. (Novels selected in the past have included Sartre, *Les Jeux sont faits*, Camara Laye, *L'Enfant Noir*, Vercors, *Le Silence de la Mer*.)

36—3 Le cinéma

(4143) Usually one work of fiction is studied along with two or more films. The books and films for the course vary from year to year.

37—3 Le journalisme

(4153) Students study current examples of French journalism for discussion of contemporary issues, and for the better understanding of the nature of journalism and of the culture represented.

38—3 Contes

(4163) Francophone literature abounds in examples of the tale, from the fairy tales of Perrault and folk tales of various francophone countries to the satirical tales of Voltaire. This course will offer an overview of the genre, while concentrating on particular examples.

39—3 Le théâtre

(4173) An active participation course in which the student follows one play from the initial reading through its final production, taking part in each of the four major phases: reading, analysis, production, performance. (Plays presented in the past have included Camus, *Le Malentendu*, and Ionesco, *La Cantatrice Chauve*.)

40—123 La civilisation française

(4191) Four prepared class periods. The course, consisting of three term-contained units, (4192) deals with aspects of French civilization such as cultural stereotypes, history, cuisine, women's roles, and francophone cultures. Students increase their practical vocabulary through discussion of texts, films, and videotapes.

41—2 Le monde francophone en dehors de l'Europe

(4202) Four prepared class periods. As an international colonial power France spread her culture through-

out the world. The course studies the civilizations of West, Equatorial, and North (Arab) Africa as well as the French civilization of the Antilles (Haiti, Martinique, and Guadeloupe). In addition to geographical, social, and historical study, the course will include the following reading: J. Roumain, *Gouverneurs de la rosée*; Aimée Césaire, *La tragédie du roi Christophe*; F. Oyono, *Le vieux nègre et la médaille*.

42—0 Littérature française

(4210) Four prepared class periods. Emphasis is placed on class participation, vocabulary building, close analysis of major literary works, and learning to write about literature.

44—1 Cours avancé de conversation et de phonétique

(4231) Four prepared class periods. Intended for students who understand, read and write French well and who already speak at a competent level, but who need further drill in conversational patterns and idiomatic expression. Diction, elocution, and intonation are also stressed through role-playing, speeches, and debates.

45—3 Québec et les Québécois

(4243) Four prepared class periods. Some amount of theory is balanced with observation and analysis of everyday life in Québec province to understand its political, economic, and social institutions, and such areas as religious, educational, and artistic life. Emphasis is on a close study of the media of Québec as well as personal involvement through liaison with Québec schools, students and newspapers, and through contact with French-speaking areas of Massachusetts and New Hampshire. The course may culminate in a trip to Québec.

51—123 Cours avancé de langue

(4261) Five prepared class periods. A course designed to meet the requirements of the Advanced Placement Examination in French Language. Open to students who have completed three terms of fourth-level French and to qualified new students. Emphasis is placed on vocabulary, conversation, composition, and reading, not only in literature, but in current newspapers and periodicals. The choice of texts is determined by the class and the instructor.

52—0 Cours avancé de littérature

(4270) Five prepared class periods. Open with departmental permission, to students who have completed three terms of fourth-level French and

to others who are properly qualified. Primarily a seminar in which students discuss their interpretations of the works studied, the course also includes lectures and instruction in *explication de textes*. Preparation for the Advanced Placement Examination in French Literature includes the close reading of texts such as: La Fontaine, *Fables*; Racine, *Phèdre*; Beaumarchais, *Le Barbier de Séville*; Flaubert, *Un Coeur simple*; poetry of Apollinaire, and Baudelaire. This course may require more than the standard 4 to 5 hours per week of homework.

60—123 Littérature moderne

(4281) Two prepared class periods plus one weekly
(4282) (90 minute) seminar. Open to students who
(4283) have completed fifth-level French or the equivalent. The course studies selected novels and dramas representative of modern era. Emphasis is on particular writers and what they add to our understanding of the human condition in our times. Authors studied may include: Proust, Gide, Colette, Malraux, Mauriac, Aragon, Saint-Exupéry, Giono, Anouilh, Giraudoux, Aymé, Camus, Sartre, de Beauvoir, Hébert, Laye and Senghor.

(9001) Projets indépendants

(9002) Qualified Seniors may undertake independent study projects in French under the direction of a faculty supervisor. Those who wish to do apprentice teaching during either the Winter or the Spring Term will study the techniques and methods of modern language instruction and will practice, under careful supervision, in beginners classes. Apprenticeships are usually undertaken along with a program of independent reading and writing in French. Application for an Independent Project must be made through the office of the Dean of Studies; departmental permission is also required.

German

A major world language whose cultural heritage has enriched western civilization for centuries, German has won a new relevance and vitality through its predominance in high technology and commerce. As the only Germanic language taught at the Academy, it also offers the student unique insights into the Anglo-Saxon roots of English, its sibling. The Department offers a 5-year course of study with the purpose of developing the ability to understand spoken German and to speak, read and write German with facility. Students who demonstrate unusual aptitude and interest are in-

vited into the accelerated sequence. Consistent with its commitment to the spoken language, the Department usually holds oral as well as written examinations each trimester. In some courses theater is used to enliven speech development and cultural immersion. Students are encouraged to supplement their on-campus language experience through a winter or spring trimester of study in Göttingen, Germany as arranged, individually through the department and the dean of studies.

10—0 First-Level German

(4300) Five prepared class periods. The beginning course develops aural comprehension and oral expression, as well as a foundation in the basic grammar. Current text: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach.

12—23 Accelerated First-level German (T2)

(4305) Five prepared class periods. This course is for especially competent members of *German 10* upon recommendation of their instructor. Successful completion of 12 allows students to advance to 22. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Kindergeschichten*, Bichsel.

10-20—0 Accelerated First and Second-Level German

(4310) Five prepared class periods. A yearlong introductory course whose goal is to cover the essential material of first and second-year German, 10-20 is particularly suited to students who have already fulfilled the diploma requirement and desire proficiency in another language. For Seniors, and for Uppers with permission. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Kindergeschichten*, Bichsel; supplementary materials.

20—0 Second-Level German

(4320) Five prepared class periods. The study of grammar and basic patterns is continued. Reading and elementary writing are introduced. Current texts: *Deutsch Heute*; *Leutebuch*, *Ein leichtes Lesebuch*; *Drei Männer im Schnee*; selected readings and tapes.

22—0 Accelerated Second-Level German

(4330) Five prepared class periods. Open to competent students from 12 and to other qualified new students with permission. Successful completion of this course, which attempts to cover the essential material of second and third-year German, enables advancement to *German 40*. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Der Richter und sein Henker*, Dürrenmatt; *Biedermann un die Brandstifter*, Frisch; supplementary readings and tapes.

30—0 Third Level German

(4340) Four prepared class periods. This course emphasizes grammar review, reading comprehension, vocabulary building, writing skills and oral expression in preparation for the College Board Achievement Exam. Current texts: *Deutsch Heute; Die Physiker, Das Versprechen, Dürrenmatt*; selected readings and tapes.

40—123 Contemporary German Language and Culture

(4351) Four prepared class periods. This course utilizes contemporary cultural materials such as periodicals, tapes, videos, and readings to introduce students to the knowledge, skills and vocabulary necessary to engage with Germans in Germany. Normally required of those Seniors intending to study in Germany Winter or Spring Term. Among the materials used are the newspaper *Die Zeit* and the periodical *Der Spiegel*.

42—0 Advanced German Language and Literature

(4360) Five prepared class periods. This course utilizes advanced German literary works as a basis for conversation and composition in preparation for the Advanced Placement examination in May. Advanced grammar review is also incorporated. Current texts: *Kafka, Das Urteil, Die Verwandlung; Goethe, Urfaust; Schulz-Sundermeyer, Deutsche Sprachlehre für Ausländer*; selected poems and tapes. This course may require more than the usual 4 to 5 hours per week of homework.

50—123 Fifth-Level German

(4371) Four prepared class periods. Open to students who have successfully completed 3 terms of fourth-level German or its equivalent, this course varies with the needs of the class but is usually a seminar in the analytical reading of modern German classics. There is frequent writing. A major term paper in German replaces the final exam. Authors currently read: Böll, Kafka, Kleist, Goethe, Mann and Brecht.

(9001) Independent Project

(9002) A pass-fail course. Under the guidance of a Department member, a qualified Senior has the opportunity to do special work in an area of choice. Application for an Independent Project must be made through the office of the Dean of Studies.

Greek

Through the study of Greek the Department of Classics offers students a direct entry into Greek literature, which is still unsurpassed in excellence. Students have traditionally studied Latin before going on to the study of Greek. However, Greek is not more difficult than Latin. The Greek alphabet is easily mastered in the first few class meetings, and students quickly discover that the Greek language has poetic and expressive qualities which stimulate the imagination and illuminate man's political and intellectual development. The regular sequence in Greek is *Greek 10, 20, 30, and 40*, though Upper Middlers wishing to accelerate may want to consider *Greek 10-20* followed by *Greek 30*.

10—0 Greek, First Level

(5010) Five prepared class periods. The course introduces the student directly to the Classical Greek of Periclean Athens through a series of readings which present not only the vocabulary, forms and syntax of the language but also the thoughts, feelings and actions that exemplify the Greek genius. Though preliminary selections are necessarily simplified, within the first year students are reading excerpts in their original form from such works as Plato and the New Testament.

10-20—0 Greek, First and Second Level, Accelerated

(5020) Five prepared class periods. The course is open to Seniors and Uppers. It covers in one year the essential material of *Greek 10* and *Greek 20*: basic forms and structure, along with ample selected readings from Xenophon and Plato, as an introduction to Greek literature.

13—1 Introduction to Greek

(5031) Four prepared class periods. The course is for students whose curiosity for the Greek language and literature has been aroused by their studies in other areas. For students who plan some day to study Russian or German, this course provides an excellent introduction into the intricacies of a highly inflected language. The student is also treated to an inside preview of a literature which, over the centuries, has provided inspiration and models for the literature of the Western World. It is a term-contained course, but students wishing to continue with Greek will have the opportunity to do so.

20—0 Greek Second Level

(5040) Five prepared class periods. The course continues the format of *Greek 10*, with further systematic development of reading skills and control of vocabulary, forms, and syntax through the medium of more advanced selections from the Greek masterpieces, always with the purpose of understanding the spirit of the people that produced them.

30—0 Greek, Third Level: *Iliad* and *Odyssey*

(5050) Four prepared class periods. Selected books of the *Iliad* and the *Odyssey*, and sometimes a play of Euripides. Students examine the nature of tragedy, heroism, and self-discovery.

40—123 Greek, Fourth Level: History, Tragedy, Lyric

(5061) Four prepared class periods. In the Fall Term
(5062) ancient concepts of justice and morality are
(5063) examined through the works of Herodotus and Thucydides. Human tragedy is explored in a play of Sophocles or Euripides in the Winter Term. The Spring Term is devoted to the study of emotion and self-expression in the Greek lyric poets.

Italian

10-20—0 First and Second Level, Intensive

(4400) Open to Seniors, and to Uppers with permission. Five class periods. Three additional meetings (30 minutes), to be arranged, will take the place of 1/2 of the usual homework obligation on those days; these small sessions afford drill and spontaneity in understanding and speaking Italian. A college text is supplemented by selected readings, recordings, songs, and the libretti and music of Italian opera. (Dr. Pascucci)

Latin

Through the study of Latin the Department of Classics offers students a direct entry into Latin literature, which, as the universal language of church, court, and scholars throughout the formative years of modern Europe, can rightly be termed the mother tongue of Western Civilization and the surest index to its meaning.

10—0 Latin, First Level

(5110) Five prepared class periods. The purpose of the course is for students to learn to read Latin literature with discernment and pleasure. Students learn the basic forms and syntax through reading and

oral drill. More advanced grammatical constructions (subjunctives, indirect discourse, and the ablative absolute) are introduced but not studied in depth. Attention is given to aspects of Roman civilization, word formation, and the influence of Latin on English. In addition there are readings from the literature of the Bible in Latin and some selections from Roman authors in English. The text is Lawall and Tafe, *Ecce Romani*, Books 1-3 (Longman).

10-20—0 Latin, First and Second Level, Accelerated

(5120) Five prepared class periods. For Upper Middlers and Seniors. A year-long accelerated introductory course covering the essential elements of *Latin 10* and *Latin 20*.

13—1 Introduction to Latin

(5141) Four prepared class periods. The course is
13—2 for students seeking an introduction to the
(5142) Latin language, or those whose studies in other languages (including English) have aroused their curiosity about the workings of languages (grammar, syntax and vocabulary). It offers special profit and fascination to students of French, Spanish, and Italian, since it illuminates much of what they already know by acquainting them with the mother language. For students who plan some day to study Russian or German it serves as an introduction to the workings of highly inflected languages. It is a term-contained course, but students wishing to continue with Latin will have the opportunity to do so. The text is Lawall and Tafe, *Ecce Romani*, Book 1 (Longman).

20—0 Latin, Second Level: Caesar, Ovid, Nero

(5150) Five prepared class periods. During the Fall Term the grammar and readings in Lawall and Tafe, *Ecce Romani*, Book 4 (Longman) are completed. In the Winter Term students read, in both Latin and English, Roman biography from the late Republic and early Empire. Selections of prose by and about Julius Caesar and Augustus as well as poems of love and mythology of Ovid are included. Students will find fascination in the Spring Term studying the biography of the imperial orge Nero and Petronius' satiric account of a feast in Nero's time with the text, Balme, *The Millionaire's Dinner Party* (Oxford).

30—0 Latin, Third Level: Cicero, Vergil, Apuleius

(5170) Four prepared class periods. The swan song of the Roman Republic is heard through the study of the life of Cicero with readings in Latin and English from Cicero himself, Catullus, and Livy. Systematic review of grammar strengthens the student's Latin

reading skills. The poetry of Vergil is introduced in the Winter Term with *Aeneid*, Book II, as well as readings from *Eclogues* and *Georgics*. In the Spring Term the student becomes familiar with life under the Empire through the social, religious, and literary elements of Apuleius' *Golden Ass* and Juvenal's *Satires*. The basic text is Gillingham and Barrett, *Latin: Our Living Heritage*, Book III (Merrill).

40—123 Latin, Fourth Level: Vergil, Suetonius, (5191) Catullus

(5192) Four prepared class periods. The Fall Term is spent reading *Aeneid*, Book IV, the great tragic romance of Dido and Aeneas. The Winter

Term offers the contrast of the Silver Age prose of Suetonius' biography of the Emperor Claudius along with Seneca's *Apocolocyntosis*, a rude farce about Claudius' deification. The Spring Term focuses on the emotional lyric poetry of Catullus, the most romantic and accessible of the ancient love poets.

50—123 Latin, Fifth Level: Vergil, Tacitus, Pliny, (5201) Horace

(5202) Four prepared class periods. In the Fall Term the students enter the world of Book I of Vergil's *Aeneid* examining his literary form and

technique, the social and political dimensions of his epic. The Winter Term takes up selections from Tacitus' *Histories* and *Annals*. Together with Tacitus' gripping study of hopelessness and disillusion in the decaying Rome of tyrants like Nero, students read from Pliny's letters, including his eyewitness accounts of the eruption of Vesuvius and the persecution of Christians. In the Spring Term students return to the Golden Age of Augustus through the lyric poetry of Horace, whose work displays flawless control of language and timeless ethical and moral ideals. Completion of the sequence of *Latin 30, 40, and 50* will qualify the student for the Advanced Placement Examination in Latin.

Russian

Communication in Russian and a knowledge of Russian culture are essential for productive interaction with the U.S.S.R. in technology and science, and for achieving controlled, responsible international relations.

As of 1987, this goal is realized for Phillips Academy Russian students through an official cultural and educational exchange with the Novosibirsk High School of Math and Science in the U.S.S.R. This 5-week exchange sends PA students of Rus-

sian to attend classes at the Novosibirsk High School while Soviet high school students study here at Andover.

Before studying Russian, many consider it strange and difficult; but its alphabet and vocabulary have the same sources as English, and it follows the same principles of grammar. Continuous oral, visual and instructional use quickly makes Russian familiar and enjoyable.

The Russian Department offers a five-year course of study. This well-established program ensures confident progress in speaking, aural comprehension, reading, and writing. At the upper levels, students use Russian word processors for their compositions. Students who demonstrate unusual aptitude and interest during the first term are invited to enter special accelerated sections in the second term. It is the policy of the Department to attain exclusive use of Russian in the classroom no later than the middle of the first year.

10—0 Introduction to Contemporary Russian

(4500) Five prepared class periods. A yearlong elementary course in speaking, listening, reading and writing. Texts: Kostomarov, *Russian for Everybody* (Russky Yazyk–Moscow); reference materials.

12—23 Contemporary Russian (Honors) (T2) (a (4515) two-term commitment)

Five prepared class periods. Especially competent students will be recommended for this accelerated course at the conclusion of the first trimester of *Russian 10*. Successful completion of 12 enables students to enter 22. Texts are essentially those of *Russian 10* and *Russian 20*.

13—3 A Short course in Beginning Russian

(4523) Four prepared class periods. Open to Seniors and Uppers. A term-contained introduction to speaking, reading, and writing Russian, using conversational text materials. This course enables students to feel comfortable with the somewhat different features of a Slavic language. It also gives a sound foundation for continuing courses in Russian language, history, and literature, whether at Andover or in college.

For another course related to Russian history and culture see History 45.

10-20—0 Intensive Contemporary Russian

(4530) Five prepared class periods. Open to Seniors, and to Uppers with permission. A

yearlong accelerated introductory course covering two years in one. Texts: Kostomarov, *Russian for Everybody*; reference materials.

20—0 Intermediate Contemporary Russian

(4540) Five prepared class periods. Completion of the elementary course with continued emphasis on active use. Texts: Kostomarov, *Russian for Everybody*; Bond, *Russian Graded Readers* (Heath); reference materials.

22—0 Intermediate Contemporary Russian (Honors)
(4550)

Five prepared class periods. A yearlong accelerated course open to students who have successfully completed *Russian 12* and to other qualified students with departmental permission. Successful completion enables students to advance to fourth-level courses. Texts and reading materials are essentially those of *Russian 20* and *Russian 30*.

30—0 Russian Expression: Conversation and Composition
(4560)

Four prepared class periods. Reading, conversation, and writing. Texts: Pekhlivanova & Lebedeva, *Russian Grammar in Pictures* (Russky Yazyk — Moscow); Bond, *Russian Graded Readers* (Heath). Reading materials include selections on Russian culture, history, geography, and Soviet civilization. Students use word processors in their composition work.

40—123 Advanced Russian Composition and Russian Classical Literature
(4571)

(4572) Four prepared class periods. Further work in conversation and writing, and an introduction to the "Golden Age" (19th Century) of Russian literature with selected readings from Pushkin, Chekhov, Gogol, Tolstoy, as well as some Soviet writers. This course may require more than the standard 4 to 5 hours of homework per week. Students use word processors in their composition work.

50—123 The Soviet People, Their Heritage and Literature
(4581)

(4582) Four prepared class periods. Fall Term: RUSSIAN LITERATURE — readings from contemporary and prerevolutionary authors.

Winter Term: SOVIET LITERATURE — an overview tracing the evolution of Russian literature from the Revolution through the war and post-war periods, and including writers in exile. Authors vary according to needs and interests of the class and may include Gorky, Bunin, Sholokhov, Bulgakov, Yevtushenko, Voznesensky, Solzhenitsyn.

Spring Term: THE SOVIET PRESS — a view of Soviet Life and culture as reflected in the media. The text is a subscription to a major Soviet newspaper. Students use word processors in their composition work.

(9001) Independent Project

(9002) Under the guidance of a member of the Russian Department, a Senior has the opportunity to do special work in Russian. It may include supervised teaching of an elementary class or work chosen in a special field. Application for an *Independent Project* must be made through the Dean of Studies.

Spanish

The Spanish Department offers a six-year course of study. Students who demonstrate unusual ability and interest during the first year are invited to join an accelerated sequence. The language of the classroom is Spanish, and extensive use is made of the language laboratory. Students learn to understand, speak, read, and write the language, and also are given a comprehensive introduction to the literature and culture of Spain and Latin America.

The Department offers various programs of study and travel abroad which enhance a student's language experience. School Year Abroad in Barcelona, Spring Term in Mexico, and the Madrid exchange are some of the possibilities. More information is available through language instructors.

10—0 Beginning Spanish

(4600) Five prepared class periods. A first-year course designed for those who have not studied Spanish before. The audio-lingual approach is used, stressing understanding and speaking. The textbook is supplemented by language laboratory practice and audio-visual materials. Selected readings and writing exercises are introduced as the student acquires confidence in oral expression.

11—0 First Level Spanish

(4620) Five prepared class periods. For new students who have been exposed to Spanish but who are not fully prepared for *Spanish 20*. The course covers basic grammatical structures through an active oral approach. The text is supplemented by language laboratory practice, selected readings and writing assignments.

10-20—0 Accelerated First and Second-Level Spanish
 (4630) Five prepared class periods. Open to Seniors, and to Uppers with permission of department chair. A yearlong accelerated introductory course which prepares the student for the third level. It develops proficiency in the four skills. The text is supplemented by short story and theatre selections.

20—0 Second-Level Spanish
 (4640) Five prepared class periods. Emphasis is on oral communication with continued practice in reading and simple theme writing. An anthology of short stories supplements the text.

22—0 Accelerated Second-Level Spanish
 (4650) Five prepared class periods. Open to students who have completed *Spanish 10 or 11* with distinction, and to other qualified students with departmental permission. An accelerated second-year course which develops communicative competence and provides intensive reading and writing practice. It enables high honors students to enter *Spanish 40 or 42*.

Third-Level Courses

Enrollment for *Spanish 30A* is by permission of Department Chair. All other electives may be chosen in *any* sequence: they are of equal difficulty, continue the development of all language skills, and are unified by a common grammar syllabus.

30A—0 Spanish Language Review
 (4660) Five prepared class periods. For students who have successfully completed *Spanish 20*, but need reinforcement in basic language structures. The goals of the course are achieved through the use of an intermediate grammar text, and readings which are selected according to the needs of the students. By permission of the Department Chair.

31—123 Culture and Civilization of the Hispanic World
 (4671) Four prepared class periods. An intermediate course which takes a social-studies approach to the culture and civilization of the Hispanic world. Students must have demonstrated a strong ability for oral and written self-expression and an interest in historical and cultural themes. This course is particularly well suited for the bilingual student.

32—123 Introduction to Literature
 (4681) Four prepared class periods. An intermediate course in which students will continue to

(4683) develop oral and written expression of Spanish through the study of literature. Students will read, discuss and analyze works by Spanish and Latin American authors. The readings, which vary by trimester, include short stories, plays and a novel.

34—123 Conversation and Composition
 (4691) Four prepared class periods. An intermediate course which has as its principal goal the development of conversational and writing skills by dealing with topics of a general and contemporary nature.

35—3 Spring Term in Mexico
 (4703) Students enrolled in a Spanish course at the 22 level or above may elect to spend the Spring Trimester in Mexico. Students intending to enroll in this course will do special research during the Fall Trimester under the direction of a member of the department. Interested students should see their academic advisor to be sure that their other courses and their diploma requirements will permit them to be off campus for that trimester. Final approval for participation in the program will be granted by the Dean of Studies.

40—123 Spanish: Language, Literature, Culture
 (4711) Four prepared class periods. The purpose of the course is to review, refine and expand speaking, reading and writing skills and to further the student's interest and awareness in the Hispanic world through varied readings from current newspapers and periodicals. Films and videotaped T.V. programs are also used to expand vocabulary and to stimulate class discussion. Students may choose to take the A.P. examination in Spanish Language.

42—0 Spanish and Latin American Literature
 (4720) Four prepared class periods. The course presupposes an extensive knowledge of grammar and vocabulary and a reasonable fluency in conversation. Emphasis is on written work, discussion and analysis of literary works. This course prepares the student for the A.P. examination in Spanish literature and/or language. The reading selections include representative works of Ana Maria Matute, Unamuno, F. Garcia Lorca, J. L. Borges, Pablo Neruda, and other literary works which complement the study of these major authors. This course may require more than the standard 4 to 5 hours per week of homework.

52—0 Spanish and Latin American Literary Masterpieces
 (4730) Four prepared class periods. The course is open to students who have the equivalent of *Spanish 40 or 42*, or with the permission of the instructor. It intro-

duces the student to the major literary works and authors of the Spanish language. Books to be read include selections from the 15th century to the present, such as *La Celestina*, *Lazarillo de Tormes*, *Don Quijote de la Mancha*, *Fuenteovejuna*, *La vida es sueño*, *Don Juan Tenorio*, *Torquemada en la hoguera*, *Los cuatro jinetes del Apocalipsis*, *Martin Fierro*, *Prosas profanas*, *Los de abajo*, *El señor presidente* y *Cien años de soledad*. This course may require more than the standard 4 to 5 hours per week of homework.

60—123 Special Literary and Cultural Topics in Spanish

- (4741)
- (4742) Four prepared class periods. Contents vary
- (4743) according to the needs and interests of the student.

(9001) Independent Project

- (9002) Qualified Seniors may undertake projects of
- (9003) independent study in Spanish under the direction of a faculty advisor. They may also

do apprentice teaching in beginning classes under faculty supervision. Application for an *Independent Project* must be made through the office of the dean of studies.

See also Latin American Studies (History 49) listed under *History and the Social Sciences*.

History and the Social Sciences

The study of history and the social sciences provides certain kinds of knowledge, skills, and understanding fundamental to a liberal education. A study of the American past continues to be a prerequisite for a participating citizen in a constitutional republic. Vital though such study is, an understanding of our nation alone is not enough. The examination of other cultures, both European and non-western, is crucial for broadening a student's understanding of an interdependent world. The Department of History and the Social Sciences, therefore, integrates the study of nonwestern cultures into courses at every grade level.

To satisfy the diploma requirement, the student must successfully complete four terms of departmental study during the 11th and 12th grades. Normally, the student satisfies this requirement by taking three terms of *United States History* (History 30-T2 and 31) and a fourth term of a 40-level *Social Science or Non-Western Survey*.

A student may, however, satisfy the 4th term of

the requirement in others ways: (1) by taking *History 25*, if a student is so assigned by the History Qualifying Test; (2) by taking *History 34-0*, the yearlong AP Survey in Modern European History (an option which is open to Lower with special permission, and to Uppers and Seniors); (3) by taking a 50-level *Survey* course (an option available only during 1987-88); and (4) by taking a 60-level *Seminar*, if a Senior has passed at least two previous terms of non-western study.

Although Juniors and Lower Middlers are not required to take departmental courses, one of the academic guidelines instituted by the Phillips Academy faculty urges that all 4-year students take "some history" by the end of the Lower year. Accordingly, the department *strongly recommends* that Juniors take *Social Science 10*, after which they may elect one or more terms of the Western Tradition course (*History 20, 21, and 22*.) Lower also may take *Social Science 10*, and we *recommend* that they take one or more terms of the Western Tradition sequence.

Exceptional 10th graders have two additional options: (1) if they have completed at least *Social Science 10* and received permission from the department chairman, then they may take *History 34-0*, the yearlong course in *Modern European History*; or (2), if they have completed the four terms of *Social Science 10, History 20, 21, and 22*, then they may begin *United States History* (History 30) during the Winter Term of their 10th-grade year. In order to be eligible for either of these options, a new Lower must take the HQT in September, make an outstanding score, and receive permission from the department chairman.

The History Qualifying Test (HQT) is given to Lower during the spring term and to all new Uppers, Seniors, post-graduates, and foreign students during the orientation period in September. The purpose of the test is to place students in the appropriate level of history study:

1) For many, the HQT indicates that the student should begin the 3-term U.S. History sequence (*History 30 (T2) and 31*) in September. Students may, however, wait to begin the *History 30* sequence a term later (in January) or a year later (the following September). All these students are reminded that they may elect the fourth term of the requirement only after they have completed one

term of the regular *History 30* sequence.

2) For some, the HQT indicates that the student should begin the diploma sequence by first taking *History 25* (either in the fall or the following spring), and then complete the 4-term requirement by taking the regular 3-term U.S. History sequence (30 (T2) and 31).

3) Finally, for students who have already had a yearlong U.S. History course in the 11th or 12th grade at their previous schools, the HQT indicates how they should complete the 4th term of the requirement (i.e., by taking *History 25* or a course at the 40, 50, or 60 levels). Placement is made by the department chairman.

Washington Intern Program

The Department co-sponsors, with the Phillips Exeter Academy History Department, a special Spring Trimester (mid-March through late May) program in Washington for Seniors taking, or who have taken, *History 30-31*, and for Uppers in *History 30*. The program is restricted to 15 Andover students and 15 Exeter students, competitively selected, for work as Interns in the offices of Senators and Representatives. The application process begins early in the previous fall trimester. Prospective applicants should avoid taking 0-yearlong courses. Uppers who are interns in the spring will take *History 31* during the fall of their senior year.

Phillips Academy Archives

The Department of History and the Social Sciences encourages the use of the Academy's extensive archival collection. For students who have completed *History 30-31* and are interested in pursuing work with the raw materials of history (including oral history), the Academy archivist offers a unique tutorial-research opportunity on some aspect of the history of Phillips Academy and Abbot Academy. Students undertaking archival study for credit should apply for an Independent Project through the Dean of Studies.

INTRODUCTORY COURSE IN SOCIAL SCIENCE

- SS10—1 Continuity and Change**
(2101) Five prepared class periods. For Juniors and
SS10—2 Lower. An introduction to the study of his-
(2102) tory and the social sciences, this course fo-

- SS10—3** cuses on the phenomenon of change both in
(2103) history and in the contemporary world. His-
torical units may include the San Bushmen
of The Kalahari Desert, The Industrial Revolution in
New England, and the bombing of Hiroshima in 1945,
while one period each week is devoted to a study of cur-
rent events. Throughout the course, great emphasis will
be given to the development of skills vital to historical
inquiry, and the understanding of historical concepts.
These skills include reading, essay writing, oral presen-
tation, critical thinking, listening, and word-processing.
Political, economic, anthropological and social concepts
will be discussed, and students will also be exposed to
the study of geography.

COURSES IN THE HISTORY OF THE WESTERN TRADITION

20—1 Ancient History

(2201)

20—2

(2202)

21—2 Medieval History

(2212)

21—3

(2213)

22—1 Early Modern History

(2221)

22—3

(2223)

Four prepared class periods. For Juniors and
Lower. Four-year students are expected to
take *Social Science 10* before taking *History 20*,
21, or 22. These courses together comprise a
survey of Western civilization from earliest times to the
beginnings of the modern world. Although the primary
goal is familiarity with our western tradition, its institu-
tions and ideas, students will also be introduced to con-
temporaneous developments in the non-western world.
Through the content of these courses, students will con-
tinue to work on learning the skills and concepts vital to
the study of history, and thus prepare for later, more ad-
vanced courses in this field.

REQUIRED SEQUENCES IN UNITED STATES HISTORY

25—1 American Biography (formerly *History 250*).

(2251)

25—3

(2253)

Four prepared class periods. For Uppers and
Seniors so assigned by the HQT. The em-
phasis is on building the skills and knowl-
edge which will be needed for successful

completion of *History 30 (T2)* and 31. Students receive considerable individual attention, especially in their writing. Course materials include: Padover's *Jefferson*; Remini's *Andrew Jackson*; and Oates' *The Fires of Jubilee: Nat Turner's Fierce Rebellion*.

30—12 The United States (T2) (a two-term commitment) (formerly *History 300*)

30—23 Four prepared class periods. For Uppers and Seniors. This course, along with *History 31* and a fourth term (usually an elective at the 40-level, with exceptions as noted in the paragraphs which precede the list of department offerings), fulfills the four-term history diploma requirement. The first term emphasizes three goals: a survey knowledge of American history through Reconstruction by reading an advanced-level text; the acquisition of skills by daily exercises in reading, note-taking, and writing; and an in-depth study of an organizing theme. The second term emphasizes American industrialization from the post Civil War years to 1940. The three goals of the first term continue, but the variety of readings and writings and the complexity of the materials increase.

31—1 The United States (formerly *History 301*.)

(2311) Four prepared class periods. For Uppers and

31—3 Seniors. The focus is on twentieth century

(2313) America to the present, with an emphasis on American foreign policy. In this term the

writing of a research paper represents a major part of the work. **Prerequisite:** successful completion of *History 30 (T2)*.

32—12 United States History for Foreign Students (formerly *History 302*)

(2321) Four prepared class periods. A course for students for whom English is a second language and whose H.Q.T. scores indicate they are not ready for *History 30 (T2)*. The course emphasizes language skills important to the study of American history and the subject matter focuses on the founding of the republic, constitution building and how the American government works, the westward movement, the Civil War and the coming of urban-industrial, multiethnic America. The intention of the course is to recognize the special needs of the students and to bring them to a level of achievement so they may transfer to the 30/31 sequence in the winter or spring term, if the students wish to be candidates for the diploma. (Mrs. Lloyd)

SURVEY OF MODERN EUROPEAN HISTORY

34—0 Modern European History (formerly *History* (2340) 334)

Four prepared class periods. This course is

open to exceptional Lowers (with permission from the department chairman) and to Uppers and Seniors, whether or not they have taken *History 30*. The course has proven to be good preparation for the Advanced Placement examination in European History. Successful completion of this yearlong course, together with a year of United States history (*History 30-31*), satisfies the department's 4-term diploma requirement. The fall term consists of background survey of the 16th, 17th, and 18th centuries, with particular emphasis on the political, economic, and intellectual revolutions that helped to mold the modern world. The focus of the Winter Term is the period 1800-1900, with continuing attention given to the shaping of modern thought, the emergence of the nation-state, and the effects of industrialism. In the Spring Term, the course covers topics in 20th century Europe; the two World Wars, and their effect; the nature of totalitarianism; the cold war and the rise of the super-powers. Reading is from primary and secondary sources, as well as fiction. Visual materials are used where appropriate. (Mr. Royce)

ELECTIVES: 40-SURVEYS IN SOCIAL SCIENCE AND NON-WESTERN HISTORY

Any of these 40-level surveys counts as the fourth term of the diploma requirement. **Prerequisite:** A student must have completed at least one trimester of *History 30* or have credit for U.S. History from another school before enrolling in a 40-survey.

SURVEYS IN THE SOCIAL SCIENCES

SS41—1 Introduction to Economics (formerly *Social Sciences 310*)

(2411) Four prepared periods. The course aims to introduce Seniors to the basic principles of economics and their application and relevance to current public policy issues. Students examine the development of the economies of the U.S. and the world, and are introduced to basic theoretical tools which help them analyze important economic issues. Classes consist primarily of discussions, although there will also be some role-playing exercises, computer simulations, class assignments, debates, guest speakers, films and student reports on their term projects. (Mr. Richards, Dr. Strudwick, Mr. Williams)

SS42—3 Urban Studies Institute (formerly *Social Science 325*)

(2423) Seniors and qualified Uppers who are not involved in year-long courses may elect for their entire spring course program to participate in a ten-week ex-

ploration of the American city, including field work six hours each week. Lawrence, Massachusetts, its history and its present shape, its people and their special problems and opportunities, is the focus of study, but the context is drawn through investigation of broad historical, social, and economic issues which affect most of urban America. Lawrence has always been an immigrant city, and one-third of Lawrence's public school students are now of Hispanic background. In addition to their academic course work, students explore a central aspect of urban life by serving as tutors in an intensive English language training program for a group of these Lawrence children; the tutoring program, which will be designed by Institute students and staff, uses dramatization and one-to-one tutoring to strengthen the children's oral and literary skills. Knowledge of Spanish or familiarity with theatre is useful, but not essential.

All students take a course in Latin American History and a course in Urban History, as well as a core course introducing developmental psychology and ethnic studies in such a way as to inform and support the fieldwork project. Students meet periodically in evening seminars with outside speakers.

Seven to nine Phillips Academy students will be selected by interview and special application. Seven to nine students from college preparatory courses in Lawrence High School will be selected in the same way. Apply to Susan M. Lloyd by December 1. Uppers who are USI participants in the spring will take *History 31* during the fall of their senior year. (Mrs. Lloyd, Mr. Quattlebaum)

SURVEYS IN NON-WESTERN HISTORY

45-123 The Russian Experience (formerly *History* (2451) 338)

(2452) This course, primarily for Seniors, but open
(2453) to Uppers with the Instructors' permission, is a survey of Russian history, literature and culture from medieval times to the present. In the Fall Term, the focus is on the development of ideas and institutions in Old Russia and the Imperial period, through much of the 19th century. In the winter, the subject is Russia in Revolution, covering the period 1880-1940, and in the spring attention is given to the Soviet Union since World War II. While any of these terms may be taken alone, students are urged to consider taking all three terms, since the course is taught as a whole, with the second and third terms building on the previous ones to develop the key themes in Russia's past and in particular to address the question of why Russian society has never developed the kind of democratic institutions with

which we are familiar. Considerable attention is given to the study of literature. The course examines the significant events and ideas of the Russian past and the reflection of these events and ideas in the fiction and memoirs of authors such as Pushkin, Gogol, Turgenev, Dostoevsky, Tolstoy, Chekhov, Gorky, Mayakovsky, Blok, Zamiatin, Babel, Mandelstam, Bulgakov, Solzhenitsyn and Aksyonov. (Mrs. Powell and Mr. Richards)

See also Russian 13 in the Foreign Language section.

46-123 East Asia: China, Japan, and Foreign Relations (formerly *History 341*)

(2462) Four prepared class periods. The fall term focuses on *Modern China*. After an introduction to traditional China's religions, thought, and institutions, the course concentrates on events since 1800, emphasizing China's response to the West, and economic, intellectual, and political developments during the 19th and 20th centuries.

The Winter Term emphasizes *Modern Japan*. After an introduction to traditional thought and feudal social structure in Japan, the course looks closely at ideas, events and developments since 1800. Readings are from historical texts, contemporary observers, sociological descriptions and literature, with a special effort to understand the outstanding features of Japanese culture, politics and economics.

The Spring Term deals with *America's Relations with East Asia*. Since the sailing of the "Empress of China" from New York for Canton in 1784, Americans, whether knowledgeable or not, have approached China, Japan, and Korea with passion. On the one hand, hatred (the Red China of Senators McCarthy, McCarran and Knowland, for instance); on the other hand, love (the crowds that mobbed Boston's Museum of Science in 1985 to view "China: 7000 Years of Discovery"). This course seeks to present a balanced introduction to those relations, and, in so doing, to provide foundation for further study. (Mr. Royce)

47-3 Africa and the World (formerly *History 344*)

(2473) This course focuses on contemporary issues facing the new nations of Africa, based on an historical analysis of the emergence of Africa from the colonial period. Political and economic development of these countries, the relations between developed and developing states, the emergence of majority rule in Southern Africa, and the role of Africa in the United Nations is studied. Readings include analyses of the issues African nations confront in the modern world, novels about Africa, and speeches and articles by African statesmen. (Mr. McNemar, Ms. Royal)

48—1 The Middle East (formerly *History* 346)

(2481) Four prepared class periods. Few if any regions of the world claim a more compelling interest than the Middle East. From its ancient site of half the earth's cultural antecedents, birthplace of three world religions, landbridge of three continents, eternal East-West corridor, and ceaseless crossroads of conquerors, pilgrims, and traders, the Middle East derives a distinctive character of its own. This course traces the region's history from the Arab awakening to the present situation. (Mr. Bunnell)

49—123 Latin American Studies (formerly *History* 348)

(2492) Four prepared class periods. This course is a survey of Latin American civilization seen through its history, literature and culture from pre-Columbian times to the present. In the Fall Term, the focus is on the Mayan, Aztec, and Inca civilizations, the Spanish Conquest, and the development of present day institutions and cultural patterns in the Iberian Colonial period. In the Winter Term, the students learn about Latin America's independence from Spain and Portugal, the republican experiment, the role of the military, the Church, the Oligarchy, and the function of class, sex and race in Latin American societies. In the Spring Term, the subject is political movements and revolutions of the 20th century, including the Mexican, the Cuban and Sandinista Revolutions. US-Latin American relations are an important component of the course in this term.

Each term can be taken independently, but students should consider taking all three terms since the course as a whole develops themes prevalent in Latin American history, in particular, the struggle against dictatorship, economic and social divisions, imperialism, and population growth. Films, and literary works of writers such as Garcia Marquez, Fuentes, Asturias, and Neruda will be used to understand how Latin Americans view their own reality. (Ms. Piana)

ELECTIVES: 50-SURVEYS

The following 50-level surveys are open to Seniors and Uppers who have completed at least one term of *History* 30. For 1987-88 only, each counts as the 4th term of the department's diploma requirement.

SURVEYS IN THE SOCIAL SCIENCES

SS51—3 History and Mathematics (formerly *Social Science* 315)
(2513) Four prepared periods. **Prerequisite:**

permission of the instructor. This course provides an introduction to the ways in which mathematics and statistics are employed in the study of history. Attention focuses on three main areas: elementary statistics and data analysis; entertaining historical controversies; and the logic of historical inquiry. To accomplish these purposes, participants do assigned homework problems in mathematics and applied statistics, read exemplary works in the field of quantitative history, and complete a history research project. (Dr. Strudwick)

SURVEYS IN HISTORY**54—123 Modern European History** (formerly *History* 334)

(2541) 334)
(2542) This course is identical in content to *History*
(2543) 34-0. It is different in that it is open only to Uppers and Seniors who have completed at least one term of *History* 30 and it may be elected for a single term.

55—123 Ancient History (formerly *History* 330)

(2551) Four prepared class periods. The course is
(2552) concerned with Greek and Roman history
(2553) from the Minoan Period to the beginning of the Medieval Period. Each term represents a coherent and independent unit. In the Fall Term the survey ends with the world empire of Alexander the Great. The Winter Term covers the period from the beginning of Rome until its transition from Republic to Empire. The Spring Term is concerned with the Roman Empire and the transition from Roman to Medieval History. (Mr. Krumpe)

56—1 Social History of the Middle Ages (formerly *History* 332)

(2561) Four prepared class periods. The course starts with the reshaping of Roman laws and customs by the rapidly emerging Christian doctrine; these in turn are changed by the invasions of the Germanic peoples. Charlemagne serves as the prime illustration of this medieval combination of attitudes. As Europe moved toward the Renaissance, humanism and rationalism dignified woman as the 'Lady' of courtly love; at the same time the fear of woman as the 'witch' haunted Europe. (Mrs. Clark)

57—1 Victorian England: England in an Age of Expansion (formerly *History* 337)

(2571) Four prepared periods. The course is devoted to a study of the major transitions and developments of nineteenth century Britain. It is divided into three central components: economic and social developments; political movements; and international relations. Since

Victorian literature more directly reflects the life and thought of the times than that of any other period of English history, the course includes an examination of those writers whose works were influential in either adapting or describing the minds and institutions of the English people to the changing conditions of the period. These writers include Hardy, Dickens and Marx. (Mr. Richards, Dr. Strudwick)

ELECTIVES: 60 SEMINARS

These 60-level electives are *seminars* for Seniors. Issue-oriented trimester courses, they meet three hours a week, with an expectation of substantial independent reading and writing. For effective discussion, they are limited to 12 students. **Prerequisite:** either (1) prior completion of the 4-term diploma requirement; or (2) completion of the 3-term U.S. History sequence (30 (T2) and 31) *plus* at least two terms of non-western history in earlier grades. Occasionally a senior may want to take a 60-seminar prior to satisfying the diploma requirement; such exceptions must be approved by the department chairman.

SEMINARS IN THE SOCIAL SCIENCES

- SS61—3 Issues in Economics** (formerly *Social Science* 420)
(2613)

Prerequisite: Successful completion of *Social Science* 41. This seminar investigates public policy issues in the field of economics. Students begin by studying the history of economic thought, relating it to our understanding of economic development. After examining the works of Adam Smith, John Stuart Mill, Karl Marx, Alfred Marshall, and John Maynard Keynes, the class addresses a series of current policy questions, such as the debates over the budget, tax reform, import restriction, supply-side economics, central economic planning, labor organization, national industrial policy, and the ethical responsibilities of business. Classes center around discussion of the assigned readings. A term paper on an issue of choice is required. There is no final examination. (Dr. Strudwick)

- SS62—2 American Race Relations** (formerly *Social Science* 415)
(2622)

This seminar investigates the development of racial attitudes in the United States. We first discuss contemporary campus attitudes and then examine the extent to which current concerns have evolved histori-

cally, studying the origins of racism in the British colonies, antebellum slavery in the American South, anti-slavery movements and anti-ethnic restrictions in the North, and the urban migration of blacks and the life of Jim Crow in the 20th century. We look closely at the movement for civil and economic rights during the 1960s and give substantial attention to recent issues—how to reconcile assimilation with separation, Birmingham with Boston, *Brown* with *Bakke*, equality of opportunity with equality of result. A final paper is expected; there is no final exam. (Mr. Williams, Mr. Rogers)

- SS63—1 International Relations: The Present Patterns** (formerly *Social Science* 425)
(2631)

SS63—3 This is a seminar on the Cold War with emphasis upon the politics of the world's two superpowers, the United States and the Soviet Union: how they created the United Nations, the Cold War, the many alliances, the nuclear arms race, and the numerous confrontations between themselves and their respective allies; how, too, they prompted the formation of the Third World and repeatedly intervened in its affairs with financial aid, advice, arms, alignments and troops; and finally, some reasons why they continue to perpetuate these massive manifestations of their great power. Textbook and periodicals are employed. (Messrs. Bunnell, Gurry)

- SS64—2 Men, Women and American Culture** (formerly *Social Science* 430)
(2642)

This seminar is designed to help students understand the experiences of men and women in American culture from the Victorian age to the present. Using interdisciplinary materials from social and intellectual history, psychology, anthropology, and literature, this course will explore how American culture has defined its ideals of masculinity and femininity since the mid-nineteenth century. We will study a variety of topics: Victorian sexuality; sex roles on the frontier; the "cult of true womanhood"; moral reform in the Progressive Era, manliness and the Strenuous Life, sex roles in the Roaring Twenties; the family and the Great Depression; the return of domesticity in the Fifties; and the pros and cons of the Women's Liberation Movement. The course will include lectures, films, discussion, guest speakers, exams, and several papers. Reading will include Peter G. Filene's *Him/Her Self: Sex Roles in Modern America*; Elizabeth and Joseph Pleck, *The American Male*; and other books and articles. (Ms. Dalton, Mr. Rotundo)

- SS65—2 Nuclear Weapons — Proliferation and Responses** (Formerly *Social Science* 440.)
(2652)

This seminar follows the evolution of and re-

action to The Bomb — from the discovery in 1938 of fission on Otto Hahn's table in Nazi Germany, to Hiroshima, the Cuban Missile Crisis of 1962, and the START Talks and cruise missiles and President Reagan's "Star Wars" speech in the 1980's. Historians, chemists, physicists, political scientists, and journalists are among those who tell the story, in lectures, documents, and secondary accounts. Readings include Richard Rhodes, *The Making of the Atomic Bomb*; Robert F. Kennedy, *Thirteen Days*; William J. Broad, *Star Warriors*; and Graham T. Allison et al., *Hawks, Doves, and Owls*. The course entails class discussions, field trips, films, readings, a research project and two exams (midterm and final). (Mr. Quattlebaum)

SEMINARS IN HISTORY

66—2 The Renaissance

(2662) Three prepared class hours plus one two-

66—3 hour studio. An interdisciplinary course

(2663) open to seniors, exploring the history and culture of the European Renaissance. Em-

phasis will be on the manner in which economic and social developments converged in Italy to stimulate a synthesis of classical and then-modern cultures, a synthesis which took on fresh shape wherever in Europe it rooted itself. In addition to reading and listening assignments in history, music and literature, students will be introduced at appropriate levels of skill to the arts that every educated Renaissance youth was expected to master: perspective drawing, the making of music and dance, and the writing of verse, for example. There will be a bi-weekly slide lecture tracing the history of Renaissance painting, sculpture and architecture, and lectures on the gathering revolution in scientific thought. All students will complete a 15-page research paper on a topic of their own choosing. There will be no final exam. (Mrs. Lloyd, Ms. Bravar, Mr. Wilkin, Mr. Bensley)

67—3 A Social History of Families in America (2673) (formerly History 450)

This seminar is based on the assumption that the social structure of American society is dependent on the nature of the family. Family constitution has changed over time because of immigration, changing sex roles and mores, the creation of the concept of adolescence, and women's liberation among other reasons. This course examines these developments as well as changing relationships between husbands and wives and parents and children from the colonial period to the present. Readings are drawn from primary and secondary sources. Students are asked to write a series of criti-

cal essays as well as the history of their family in America. (Dr. Taylor)

68—2 The Courts and Constitutional Development, 1935-1985 (formerly History 455) (2682)

This seminar focuses on the often conflicting rights of individuals and society as decided by the courts in the years 1935-85. What are the legal powers and limits of government to regulate the actions of individuals in the public interest? To what extent may government regulate private businesses relative to working conditions, consumer interests, or the environment? To what extent may the courts act to protect the rights of freedom of speech, press, assembly, and religion; rights against illegal search and seizure; rights of those accused of crimes; and equal rights to vote, education, employment, and housing opportunities regardless of race, religion or sex? The seminar examines the relationships between ethics and social values, political and economic developments, special interest groups, and the development of law. Students analyze the roles of lawyers and judges; legal procedures; the influence of special interests; and the arguments of prosecutors, plaintiffs, and defendants. The readings emphasize the case method by works such as Westin's *The Anatomy of a Constitutional Law Case*; Kutler's *The Supreme Court and the Constitution*; Lyons' *The Supreme Court and Individual Rights in Contemporary Society*; and, especially, Supreme Court decisions. The basic classroom procedure is Socratic dialogue, and the climax of each student's study is the critical analysis of a constitutional law case. (Mr. Lyons)

Mathematics

The mathematics curriculum is built around a core sequence of eight trimester courses: three of elementary algebra, two of geometry, one of intermediate algebra and two of precalculus topics. The completion of these eight trimesters will satisfy diploma requirements, but an additional trimester is required before entering the calculus. Placement of new students in the appropriate first course is made by the department considering the record in previous schools, the results of a self-administered diagnostic test in elementary algebra which is sent to newly admitted students in the Spring, and the course program chosen by the entering student. In general, algebra courses taken before the eighth grade and geometry courses taken before the ninth grade will not earn placement credit. Examinations to validate first and second year algebra skills are

given early in the Fall trimester, at which time students who are incorrectly placed can be shifted to higher or lower level courses.

Students entering with no prior study of algebra start with *Mathematics 10*; those with a partial year of algebra enter *Mathematics 15*. Students entering with a full year of algebra start with *Mathematics 21-1*. If the results of placement testing indicate a need for *Algebra Review*, then students who have not taken geometry start with *Mathematics 19-1* and continue to *Mathematics 21-2*.

New students who have taken one year of elementary algebra and one year of geometry will satisfy diploma requirements by taking *Mathematics 32-1*, *34-2* and *35-3*. Those with a strong background in intermediate algebra may enroll directly in *Mathematics 34-1*. If, on the basis of our testing, the student's algebra skills are weak, then *Mathematics 25-12* may be required before precalculus.

It is generally best to take the College Entrance Examination Board Achievement Test (Level II) in Mathematics near the end of or immediately following *Mathematics 36*.

For students who wish to go beyond the required level, the department offers many electives, some of which lead up to and beyond the Advanced Placement Calculus Examinations of the College Board. The prerequisites of these elective courses should be noted, particularly by students who are involved in Off-Campus Programs.

Hand Calculators

Every student taking Mathematics or Physical Science must have a suitable hand calculator capable of handling square roots, sines, cosines, reciprocals, logarithms and exponents. Any calculator with *sin*, *log* and inverse function keys is adequate for all course use.

COURSES LEADING TO SATISFACTION OF THE DIPLOMA REQUIREMENT:

10—0 Elementary Algebra

(3100) Five prepared class periods. A year-long course for students who have had little or no algebra. Stress is placed on an understanding of the elementary structure and language of the real number system, on the manipulative skills of simplifying expressions and solving first and second degree equations, and on the study and graphing of polynomial functions.

Work is done with word problems, inequalities, irrational numbers, and right triangle trigonometry. **Prerequisite:** None.

15—12 Elementary Algebra (T2) (a two-term commitment)

(3154) Five prepared class periods. A two-term course for those new students whose knowledge and skills are not strong enough to enter the one-term *Algebra Review* or *Geometry*. **Prerequisite:** A half to a full year of algebra.

19—1 Algebra Review

(3191) Five prepared class periods. A course for students who enter with a full year of algebra whose knowledge and confidence indicate they need a brief review of algebra. **Prerequisite:** A full year of algebra.

21—1 Geometry

(3211) Five prepared class periods. A course for

students who have had a strong ninth grade algebra course, but no geometry. This course

is a thorough and systematic presentation of

synthetic Euclidean geometry. Strong emphasis

is placed on the need for precision and clarity in the writing of formal proofs. **Prerequisite:** A complete course in elementary algebra comparable in coverage to *Mathematics 10-0*.

22—1 Geometry

(3221) Five prepared class periods. This course continues

the work of *Math 21*, with increased emphasis on the algebraic/numerical aspects

of geometry. **Prerequisite:** *Mathematics 21*.

(3222)

(3223)

25—12 Algebra Consolidation (T2) (a two-term commitment)

(3254) Five prepared class periods. A course for new students entering Phillips Academy with one year of algebra and one year of geometry, whose algebra skills are not strong enough for placement in *Mathematics 32* or *34*. The course begins with a comprehensive review of elementary algebra, and concludes with topics in intermediate algebra (as listed in the course description of *Mathematics 32*). Students who do satisfactory work in this course enter *Mathematics 34* in the Spring Term of their first year. Students with a (T2) grade of 2 or lower in *Mathematics 25-12* enter *Mathematics 32-3* in the Spring.

31—0 Geometry and Precalculus

(3310) Five prepared class periods. A yearlong course for entering students who have com-

pleted an Algebra 2 course but have not studied geometry. The course covers Euclidean geometry (both synthetic and coordinate) and elementary functions (including polynomial, circular, exponential and logarithmic functions). **Prerequisite:** Credit for one year of elementary algebra and one year of intermediate algebra.

32—1 Intermediate Algebra

(3321) Five prepared class periods. Topics in intermediate algebra, including sets; properties of real numbers; factoring; fractions; exponents; radicals; absolute value; inequality; solutions of linear, quadratic, and radical equations. **Prerequisite:** *Mathematics 22*, or its equivalent.

its equivalent.

34—1 Precalculus

(3341) Five class periods, four prepared and one unprepared. More topics in intermediate algebra, including absolute value and inequality; slopes and equations of lines; introduction to functions, including linear and quadratic functions; graphing and applications of functions. **Prerequisite:** *Mathematics 32*, or a (T2) grade of 3 or higher in *Mathematics 25-12*.

35—1 Precalculus

(3351) Five class periods, four prepared and one unprepared. A continuation of the study of functions, including polynomial, exponential, logarithmic, trigonometric and inverse functions. Completion of this course satisfies the diploma requirement. **Prerequisite:** *Mathematics 34* or its equivalent.

40—12 Elementary Functions (T2) (a two-term commitment)

(3404) Five prepared class periods. A two-term course for entering Seniors whose prior work fails to satisfy diploma requirements. Work focuses on a review of the fundamentals of algebra, and the elementary functions. Students with high quality work in the Fall trimester may satisfy the diploma requirements and take *Mathematics 50-23 (T2)*. **Prerequisite:** Credit for three years of high school mathematics.

ELECTIVE COURSES

Only courses with sufficient enrollment will be given.

36—1 Precalculus

(3361) Five class periods, four prepared and one unprepared. Required of students coming from 35 who plan to study calculus. Topics

36—3 that bridge the gap between algebra and calculus, including circular and trigonometric functions. In the Fall Term, new Seniors who do poorly on in-class testing may be placed in the first term of 40(T2). **Prerequisite:** *Mathematics 35*, or its equivalent.

37—2 Discrete Mathematics

(3372) Four prepared class periods. This course provides exposure to some topics from the areas of discrete mathematics and finite mathematics such as mathematical induction, sequences, series, recursion, and vectors. It also increases mathematical maturity by emphasizing the solution of sustained and demanding problems, thereby strengthening the student's background for studying calculus and other college level mathematics. **Prerequisite:** *Mathematics 36* or its equivalent.

41—1 Probability

(3411) Four prepared class periods. Includes sample spaces, counting problems, sampling, conditional probability, random variables, expected value, variance, standard deviation, binomial and normal distributions. The computer is used on applications that are too time-consuming to perform by hand and to simulate experiments for which there is no model. **Prerequisite:** *Mathematics 35*, or its equivalent.

42—2 Statistics

(3422) Four prepared class periods. Applications of various distributions, hypothesis testing, statistical inference and data organization. **Prerequisite:** *Mathematics 41*.

50—23 Elementary Calculus (T2) (a two-term commitment)

(3505) Four prepared periods. This course, for Seniors only, does not specifically prepare for the Advanced Placement Examination. The approach to calculus is concrete, informal and applied, as opposed to abstract, deductive and theoretical. Topics include applications of the derivative and integral to problems of optimization, curve sketching, rate of change, area, volume, and work. Techniques will be developed to apply derivatives and integrals to logarithmic, exponential, trigonometric and inverse functions. **Prerequisite:** *Mathematics 36*, or an equivalent course in trigonometry and elementary functions.

51—1 Elementary Calculus

(3511) Five prepared class periods. For Seniors only. The first of a three term sequence that covers the syllabus for the AB Advanced Placement Ex-

amination of the College Entrance Examination Board. Topics covered include: review of functions and graphing, limits and continuity, the derivative and its applications. **Prerequisite:** *Mathematics 36*, or its equivalent.

52—23 Elementary Calculus (T2) (a two-term commitment)

Five prepared class periods. For Seniors only. Course finishes the AB Advanced Placement Syllabus. Topics covered include: the definite integral, techniques and applications of integration, and the Fundamental Theorem of the Calculus. **Prerequisite:** *Mathematics 51*.

53—3 Elementary Calculus

(3533) Five prepared class periods. The first of a four-term sequence of courses covering the syllabus of the BC Advanced Placement Examination of the College Entrance Examination Board. Topics covered include limits and continuity, the derivative and its applications, the Chain Rule, related rates, Rolle's Theorem and the Mean Value Theorem. **Prerequisite:** *Mathematics 36* or its equivalent.

54—0 Calculus

(3540) Five prepared class periods. This yearlong course continues the work of *Mathematics 53* and prepares students for the BC Advanced Placement Examination. Topics covered include theory of the definite integral, techniques and applications of integration, the Fundamental Theorem of Calculus, parametric equations and infinite series. **Prerequisite:** *Mathematics 53* or its equivalent.

55—0 Honors Calculus

(3550) Five prepared class periods. A yearlong course in analytic geometry and calculus which begins only in the Fall. Enrollment is limited to able and committed mathematics students. Satisfactory completion of this course prepares for the College Board BC Advanced Placement Examination. This course may require more than the standard 4 to 5 hours per week of homework. **Prerequisite:** *Mathematics 36* or its equivalent, and departmental permission.

65—0 Calculus of Vector Functions

(3650) Four prepared class periods. For students of demonstrated ability and interest. Vectors and the geometry of 3-space, functions of many variables, partial differentiation, multiple integration, line integrals, Green's Theorem, Stokes' Theorem, linear transformations and matrices. **Prerequisite:** *Mathematics 54*, *55* or permission of the instructor.

68—123 Mathematics Seminar

(3681) A course for students who have finished
(3682) *Mathematics 65*. The topics studied will vary
(3683) according to the needs and interests of the students. **Prerequisite:** *Mathematics 65*, and permission of the instructor.

COMPUTER COURSES

The Mathematics Department is located in Morse Hall, which also houses three computer labs. One lab has 16 IBM Personal Computers (networked); a second contains 14 Apple IIe microcomputers; and a third lab, dedicated primarily to word processing, contains 4 Apple IIe's, 11 Apple Macintoshes and 6 Zenith 158 (IBM compatible) microcomputers. A variety of computer courses is offered that range from an introduction to computers to preparation for the Advanced Placement Examinations in Computer Science. Computer languages taught include LOGO and Pascal.

Students who desire an introduction to computer programming but who have little or no computer experience normally enroll in *Computer 20* or *Computer 30*. Those who feel confident about their ability to work independently as they learn to program or who expect to enroll in higher level computer courses should choose *Computer 30*. Those who desire an overview of computing as they learn to program or feel that they need more interaction with the computer during class should choose *Computer 20*.

Computer Computer Competence (LOGO)

20—1 Four prepared class periods. A one-term
(3821) course in *programming* in the LOGO language for students with little or no previous experience with computers. The
20—2 course focuses on some of the important
(3822) applications of computers: graphics,
20—3 word processing, and data management.
(3823)

Topics are introduced with commercial software packages. Then students design and program simplified versions of these packages. Design skills and user-friendly programming are stressed. This course does not qualify a student for *Computer 40* or *50*. **Prerequisite:** None. Not open to students from *Computer 30*.

Computer Beginning Computer (Pascal)
30—1 Four prepared class periods. An introduction to structured programming using the (3861)
30—2 Pascal language. The course introduces (3862)
30—3 programming methodology and its problem solving techniques along with the basic forms of Pascal. Students will learn to (3863)
 write programs of moderate length and to use the program development system. This course qualifies a student for *Computer 40* or *Computer 50*. **Prerequisite:** *Mathematics 22 (Geometry)*.

Computer Intermediate Computer (Pascal)
40—2 Four prepared class periods. For students (3902)
40—3 with programming experience in Pascal. The course continues the practices and (3903)
 disciplined approach to problem solving introduced in *Computer 30*. Various standards algorithms such as searching and sorting will be introduced. The syllabus will be guided by the course description of the A Advanced Placement Examination in Computer Science. **Prerequisite:** *Computer 30* or permission of the department.

Computer Computer Science
50—1 Five prepared class periods. The first (3951)
 term of a yearlong course in algorithms and data structures using primarily the Pascal language. The emphasis will be on programming methodology and some standard algorithms. The curriculum will be guided by the course description of the College Board AB Advanced Placement Examination in Computer Science. This course may require more than the standard 4 to 5 hours per week of homework. **Prerequisite:** *Computer 30* or permission of the department.

Computer Computer Science (T2) (a two-term commitment)
50—23 Five prepared class periods. Continuation (3955)
 of *Computer 50—1*. The emphasis will be on data structures and larger programs. This course completes the preparation for the AB Advanced Placement Examination in Computer Science. This course may require more than the standard four to five hours per week of homework. **Prerequisite:** *Computer 50—1*.

MUSIC

The diploma requirement in Music for entering Juniors and Lower Middlers is one trimester of music, which is satisfied by *The Nature of Music (Music 20* or *21)*. This course is also a prerequisite for courses in the History and Appreciation and the

Theory categories, but is not a prerequisite for the Applied category. Entering Upper Middlers must take a trimester course in Music or Art at the Academy: *Music 20* or its equivalent.

Entering Seniors need not take a Music course. Exemption from *Music 20* as a prerequisite is granted on the basis of an exam and/or by permission of the department chairman. However, there is no exemption for the Music diploma requirement.

See also **The Renaissance (History 66)** in the listings of History and the Social Sciences.

APPLIED

15—123 Fidelio Society
 (6151) Pass/Fail. Three prepared periods. Open to
 (6152) all classes. This small group of mixed voices
 (6153) is selected from the *Chorus (Music 17)*. It performs on numerous occasions throughout the year both on *Chorus* programs and on its own. Its repertoire includes music of all types, early and modern, sacred and secular. Membership is by audition and is conditional upon good standing in the *Chorus*. This course, if failed, cannot be made up by examination.

16—123 Band
 (6161) Two double periods. Open to all qualified
 (6162) students. Tryouts are held any time before
 (6163) the beginning of a term to test the student's ability and to arrange for seating. There are some school-owned instruments available for student use. All types of music for wind ensemble are rehearsed. It includes marches as well as classical, popular, and show music. Much sight reading is done, and at least one public concert per term is given. This course, if failed, cannot be made up by examination.

17—123 Chorus
 (6171) Two double periods. Open to all qualified
 (6172) students. The *Chorus* is the Academy's major
 (6173) singing group, comprised of mixed voices, and performs a variety of choral works, both sacred and secular. No previous choral experience is necessary; just a desire to work hard and enjoy a unique choral experience. This course, if failed, cannot be made up by examination.

18—123 Chamber Orchestra
 (6181) Two double periods. Open to all classes.
 (6182) Most of the music played is for string orchestra; the best winds in the school are invited to join for larger works. While *Chamber Or-*
 (6183)

chestra may be elected as a credit-bearing course, it is also an activity in which all are invited to participate. This course, if failed, cannot be made up by examination.

19—123 Private Instrument and Vocal Lessons

(6191) Two class meetings plus required concert attendance. Lessons are available on all orchestral instruments including, in addition, piano (classical or jazz), guitar, saxophone, organ, harpsichord, carillon, and voice.

In addition to practicing daily, the credit students are expected to meet the following commitments: 1) a once per week meeting with their private instructor; 2) a once per week seminar, providing a broader practical/theoretical background; (credit students would be assigned seminar groups according to their instrument and background); 3) a required attendance of three concerts, on campus, per term.

There is a charge of \$210 per term for half-hour instruction, or \$300 per term for full-period (50 minute) lessons, and a nominal fee for use of practice pianos and organs. Orchestral and band instruments are available for rental. **NOTE:** Beginners (as defined by the department) **MUST** take two consecutive terms of *Music 19* if they are enrolled as credit students. This course, if failed, cannot be made up by examination.

20—1 The Nature of Music

(6201) Five prepared class periods. This course is designed to give a general background in history, theory, and practical aspects of music. Music from its earliest sources to the present is examined. Also, the role of music and the arts in each of its cultural stages is studied. Students receive some first hand experience with musical instruments. No previous experience in music is required.

21—1 The Nature of Music (for Juniors).

(6211) This course covers the same material as *Music 20* (see above), but is designed specifically for those Juniors whose verbal and writing skills may be weak. Juniors with no such demonstrated weaknesses may take *Music 20*.

HISTORY AND APPRECIATION

The Nature of Music (Music 20 or 21) is a **prerequisite** for all courses in this section.

26—23 Seminar in the History of Music

(6262) Two class meetings. Open to Lower and Upper Middlers and to Seniors. This course,

taught in seminar fashion, is one where a great deal of reading, listening, and analysis is expected to take place outside the classroom. The composer or composers and era to be studied each term will be decided by the class and the instructor. (Sample topics: Beethoven and the Era of Revolution; The Life, Times and Music of J.S. Bach.) Hours to be arranged.

27—123 Independent Study in the History and Literature of Music

(6271) Four prepared class periods. Open to Upper Middlers and Seniors. A student who has taken at least one trimester of *Music 26* may, with the permission of the instructor, pursue an independent course of study in either a particular type of music or a particular period of music.

28—3 Jazz

(6283) Four prepared class periods. Open to Upper Middlers and Seniors. A study of the history of classic jazz, dating back to its roots in Africa, its development in New Orleans, its spreading to New York and Chicago, and its influence on music today. A survey of ragtime, blues, Dixieland, fox-trot, on through the big band era of the thirties, concluding with the jazz rock of today. A study of the influence and contributions of the major personalities such as W.C. Handy, Jelly Roll Morton, Louis Armstrong, Basie, Whiteman, Gershwin and the rest of the greats.

29—3 Opera

(6293) Four prepared class periods. A study of perhaps the richest of all musical genres and one which lends itself to discussion and analysis. The course will focus, after a brief survey, on four major operas from different periods: typically Baroque, Classical, Romantic and modern. Study will be made of the text, in translation, if necessary, the composer's style, the special relationship between words and music and the background to a performance. Selection will be based on which operas are being performed in Boston and what is available on film or video.

THEORY

The Nature of Music (Music 20 or 21) is a **prerequisite** for all courses in this section.

32—23 Conducting

(6322) Hours to be arranged. Open to Upper Middlers and Seniors. A course in conducting and basic musicianship. This course is

designed to give the student an introduction to the conductor's world through developing conducting skills and score analysis.

33—1 Theory of Music I

(6331) Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors.

This course offers an introduction to harmonic progression, triads, modes, rhythmic coordination with dictation. Some original work is also expected.

34—2 Theory of Music II

(6342) Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors. **Pre-**

requisite: *Theory of Music I* or permission of the instructor. This course deals with harmonic progressions, modulations, figure bass, and an introduction to counterpoint and harmonic analysis.

35—3 Theory of Music III

(6353) Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors. **Pre-**

requisite: *Theory of Music II* or permission of the instructor. This course includes advance figure bass, more complex chords, and a brief introduction to nineteenth and twentieth century techniques.

36—1 Electronic Music

(6361) Four prepared class periods. **Prerequisite:**

36—2 *The Nature of Music (Music 20)* or permission

(6362) of the Department Chairman. A course for

36—3 the benefit of those who seek to expand their

(6363) domains of creativity by understanding and

utilizing the conceptual approaches inherent in electronic music synthesizers and related equipment. Using a practical approach, the course begins with the care and feeding of the tape recorder and proceeds to the functioning and operation of electronic music modules. A lab fee of \$15.00 is charged for the use of the synthesizer.

40—123 Advanced Techniques in Electronic Music

(6401) Four prepared class periods. **Prerequisite:**

(6402) *Electronic Music (Music 36)*. A course de-

(6403) signed for the continuation of the skills and techniques developed in *Music 36*. A lab fee

of \$15.00 is charged for the use of the synthesizer.

Philosophy and Religious Studies

The Department seeks to initiate students into three distinctive human quests: the search for meaning, the search for justice and the search for

the foundation of knowledge. The process of initiation is intended not only to provide an introduction to outstanding literature in the field but also to assist the student in effecting a personal appropriation of the search and in developing the necessary skills for its pursuit. Active class participation is an essential part of this process. **Hence failed courses usually cannot be made up by examination alone.**

The department diploma requirement is successful completion of any one-trimester course; this requirement applies only to those who attend Phillips Academy for three or four years. Courses are offered at a variety of levels. All courses involve four prepared class periods.

20—3 The Biblical World View: An Introduction

(7203) Four prepared class periods. Open to Juniors and Lower Middlers. Why was the world

created? Why are we humans placed on this earth? What are we like? What should we try to achieve in life? How should we treat one another, other creatures, and the planet on which we live? For many centuries the Bible provided for many people a response to such questions. In our day, however, the message has become both unclear and increasingly unfamiliar. In this course we shall look at the composition and the historical setting of the Bible (Old Testament), then read selected passages of Biblical narrative and reflection which introduce persons and principles central to the Biblical view of the world, its inhabitants, and its Creator. (Ms. McCaslin)

21—1 Introduction to Ethics: Discernment and Decision

(7211) — 21—2 Four prepared class periods. Open to Juniors and Lower Middlers. Rooted in concrete issues

(7212) and experiences of everyday living this

21—3 course provides an introduction to the skills

(7213) of discernment. Drawing case studies from

literary and topical sources, bioethics, law and education, the class will critically investigate the often unspoken presuppositions that give rise to moral decision. (Dr. Avery)

23—1 The New Testament Perspective

(7231) Four prepared class periods. Open to Juniors and Lower Middlers. The course will consid-

er, in their cultural and historical context, the person and teaching of Jesus of Nazareth, the development of the early Christian community and the religious claims of that community concerning the Christ. (Fr. Gross)

24—2 Religious Discoverers

(7242) Four prepared class periods. Open to Juniors and Lower Middlers. The experiences of a

handful of individuals have exerted an extraordinary influence on the life of the world. These individuals can be called religious discoverers, each of whom has forged a vision of how life should be lived that persons, communities and whole cultures have found compelling for a thousand years or more. We will examine four such discoverers: Jesus, Moses, Muhammad and Buddha. We will study how their lives have provided exemplary models for living for the religious traditions they represent. (Ms. McCaslin)

30—1 Introduction to Non-Western Religions

(7301) Four prepared class periods. Open to Lower and Upper Middlers and Seniors. This

30—3 course provides a brief introduction to four of the world's major religions: Islam, Hindu-

ism, Buddhism, and Taoism. Huston Smith's classic, *The Religions of Man*, is the text. Additional readings are drawn from basic religious texts of the traditions. (Ms. McCaslin)

32 Post-Biblical Jewish Thought: Responses to the Holocaust (Not offered in 1987-88)

Four prepared class periods. Open to Lower and Upper Middlers and Seniors. An exploration of the holocaust through diaries, memoirs, works of fiction, poetry, and later reflections on the phenomenon.

Questions to be dealt with will include: what was it like for the victims? What was it like for the Nazis? How could it have happened? What elements from Jewish, Christian and secular tradition contributed to its possibility? What have been some of its effects on our own feelings about life and human beings? How have various Jewish, Christian, and secular thinkers responded to the challenge of this event?

33—2 Varieties of Religious Experience

(7332) Four prepared class periods. Open to Lower and Upper Middlers and to Seniors. A critical examination of some of the most universal and enduring forms of religious experience: ecstasy, myth-making, ritual expression and the disciplines of meditation and prayer. Concepts and models of understanding are introduced as useful tools with which to approach the phenomena of religion. (Ms. McCaslin)

36—1 Proof and Persuasion

(7361) Four prepared class periods. Open to Lower and Upper Middlers and Seniors. A practical

36—2 introduction to informal logic and to the philosophical study of language. Some of the ques-

36—3 tions raised are: What is the difference between a good argument and a poor one? What are the common fallacies of thought? What are the limita-

tions of logic? What is the meaning of "meaning" and the truth about "truth"? The course stresses the development of individual skill in argument and includes a critical examination of the patterns of thought one encounters every day in magazines, newspapers and on television. (Mr. Hodgson)

41—1 Views of Human Nature

(7411) Four prepared class periods. Open to Upper

41—3 Middlers and Seniors, and to Lower Middlers with permission of the instructor. A critical ex-

(7413) amination of selected traditional and contem-

porary views of human nature with the following questions in mind: Do we have a characteristic nature? What are our basic needs, purposes, rights, obligations and values? To what extent are our actions determined by heredity and instinct? Are we free? Are we responsible for our actions? Do the answers to any of these questions differ for males and females? Given an understanding of human nature, how should we structure society to satisfy our needs and take advantage of our potential? Class discussions and written exercises are designed to encourage participants to develop views of their own against a background of a basic understanding of the readings. These include selections from the *Bible*, selections from the works of Plato, *On Aggression* by Konrad Lorenz, *Walden Two* by B.F. Skinner and *The Politics of Experience* by R.D. Laing. (Mr. Hodgson)

42—123 Bioethics

(7421) Four prepared class periods. Open to Upper

(7422) Middlers and Seniors. Do our genes deter-

(7423) mine our behaviour and biology our values?

Should we be conducting scientific experiments on live animals and our fellow human beings? How much is a salt marsh worth? Should the government be telling physicians what they may or may not do? Is there any ethical limit to genetic engineering? What is ethics anyway? Using primary resources written by scientists and physicians, lawyers and philosophers, the course examines these and other issues raised when biology, biotechnology, and ethics intersect. Fall and Winter Terms will focus on medical issues and Spring Term on biology and the environment. Terms may be taken in sequence or separately. (Dr. Avery)

43—1 Law and Morality

(7431) Four prepared class periods. Open to Upper

43—2 Middlers and Seniors, and to Lower Middlers with permission of the Instructor. A critical ex-

43—3 amination of issues that arise out of the relationship between law and morality. Questions

(7433) of concern include: For what reasons, if any, should an individual obey or disobey the laws of society?

Which kinds of governments (monarchy, aristocracy, democracy, etc.), if any, are legitimate? To what degree should society restrict the freedom of individuals through laws on matters like abortion, pornography, race and sexual relations? Class discussions and written exercises are designed to encourage participants to develop views of their own against a background of basic understanding of the readings. These include selections from the works of Plato, Hobbes, Rawls and Martin Luther King, Jr. (Mr. Hodgson)

44 Nonviolence in Theory and Practice (Not offered in 1987-88.)

Four prepared class periods. Open to Upper Middlers and Seniors. The militarily most destructive century in human history, our twentieth century, has also been one in which such men as Gandhi and Martin Luther King, Jr., have successfully applied nonviolence to conflict situations. What is the theory of this approach to human conflict? What are some of its psychological assumptions? What is its religious and human significance? By what means does it operate? What are its prospects for the age ahead? We shall use case histories, the testimonies of those directly involved in such struggles, films, critical and theoretical studies in trying to clarify and comprehend some of these elements of nonviolence. Readings include Joan Bondurant's *The Conquest of Violence* as well as writings of Gandhi and King.

45—2 In Search of Meaning

(7452) Four prepared class periods. Open to all Upper Middlers and Seniors and to Lower

45—3 Middlers with permission of Instructor. The reflective person is confronted with questions

that hunger to be answered yet elude definitive, "objective" answers. The person's faith is often what sustains him/her and provides "subjective" answers to these fundamental questions. The issues of creation, of death, of evil, of identity, of purpose all challenge one's faith. This course (which takes its title from Victor Frankel's book) will consider these issues from a faith perspective using Scripture, literature (i.e. *Equus*, *No Exit*, *The Little Prince*, *The Shadowbox*, *Man's Search for Meaning*, *I Heard the Owl Call My Name*, etc.) and other materials. (Fr. Gross)

50—2 Existentialism

(7502) Four prepared class periods. Open to Upper Middlers and Seniors. The term "existential-

ism" covers a broad range of attitudes and values that are joined together by an emphasis on human existence. The authors brought together in its name share a characteristic concern for the problems of meaning, identity and choice that confront men and women in everyday life. The lectures, discussions and readings are designed to help us

locate and express these problems as they confront each of us in our own lives and to assist in understanding and resolving them by drawing on the experiences and insights of the major existentialist thinkers. Readings: Nikos Kazantzakis, *Zorba the Greek*; Friedrich Nietzsche, *Thus Spake Zarathustra*; Jean-Paul Sartre, *No Exit* and *Being and Nothingness*; Søren Kierkegaard, *The Sickness unto Death*; Martin Buber, *I and Thou*. (Mr. Hodgson)

51—1 In Search of Justice: from Socrates to Marx

(7511) Four prepared class periods. Open to Upper

51—2 Middlers and Seniors. God, emotion, logic,

(7512) social necessity and economic laws have all

51—3 been invoked as the final arbiter of justice. The

(7513) class will examine the major answers to the

problem developed by Plato, Aristotle, Mill, Marx and others. The course aims to assist critical awareness of the ultimate criteria of one's own evaluations and those of others so that she/he be better equipped to make her/his own contribution to the never-ending search for justice. (Dr. Avery)

52—3 Great Philosophers

(7523) The great philosophers challenge us to address difficult and fascinating questions that

perennially face mankind: What is the good life? What are the sources of human experience? Is there anything we can know with certainty? Does God exist? What is the relationship between my mind and my body? This course critically evaluates the responses of Plato, Descartes, Hume and Whitehead. (Mr. Hodgson)

Physical Education

All Juniors and new Lowerers are required to elect one trimester of *P.E. 10* in addition to their regular athletic commitment.

10—1 Physical Education

(9201) Pass/Fail. Limit of 15 students per section.

10—2 Five class periods per week. A course integrating

(9202) health and fitness concepts with self-

10—3 testing and challenge activities; two class

(9203) periods per week are spent using the running

track, weight room, ropes course and other areas of the athletic complex. Two class periods are devoted to drown-proofing survival swim technique and C.P.R. training. One period per week is lecture-discussion, requiring some outside reading or other preparation. If the course is failed, the student will repeat it, in full or in part, during a subsequent term. Students should not enroll in this course unless they are able to swim.

Psychology

The Psychology Department offers a variety of elective courses which examine fundamental concepts in the field. Particular emphasis is placed on helping the student explore the interface between psychological knowledge and personal growth. This is accomplished by utilizing teaching strategies which integrate formal academic work with frequent opportunities for student participation and self-exploration. The introductory level courses offer an overview of the fundamental ideas and classic experiments in psychology and consider the complexity of social development. The advanced level courses examine how individuals behave in groups and how healthy relationships are formed and maintained.

32—1 Introductory Psychology

- (7021) One double period and two prepared class periods; for Uppers and Seniors. A survey course designed to introduce the student to the complexity and diversity of psychological inquiry. Emphasis is placed on the application of basic psychological principles

to individual experience in order to expand awareness of both self and others. In addition, the broader implications of psychological findings for an integrated understanding of human development and behavior are considered. Topics to be covered may include: psychoanalytic, behavioral and humanistic theories of the person, psychosocial, cognitive, moral and early childhood development, human motivation and personality, abnormal behavior and research techniques in psychology. Lectures are designed to catalyze discussion. A combination of objective examinations and individualized writing assignments are utilized to evaluate the student's learning. (Dr. Jackson, Dr. Israel, Dr. Aloviseti)

33—3 Developmental Psychology

- (7033) One double period and two prepared class periods; for Uppers and Seniors. An examination of human growth and development from infancy through adulthood. The role of early experiences and biological factors in later formation of personality, intellectual and motivational behaviors will be considered. Different theoretical perspectives (psychodynamic, social learning and biological) of psychological development will be examined as they relate to developmental milestones. Among the theorists to be studied are Piaget, Erikson, Freud, Gilligan, Bandura, and Vaillant. The format of the course includes readings, films, quizzes, and a term paper.

40—2 Human Relations

- (7102) Pass/Fail. One double period and two prepared class periods; for Uppers and Seniors.
(7103) The many dimensions of human relationships are explored. Emphasis is placed on

assisting the student to articulate his or her emerging psychological awareness of personal and social relationships. Primary source readings and structured experiential exercises are used to develop an understanding of psychological concepts as rooted in individual experience. Topics to be considered include: core human conflicts, characteristics of the healthy individual in relationship to others, how family experiences and communication styles can shape relationships. In addition the format of this course includes: active class participation, written assignments and a final term paper. This course, if failed, cannot be made up by examination. (Dr. Yocum)

42—2 Group Theory and Process (Not offered in 1987-88.)

42—3

Pass/Fail. Two double class periods; for Uppers and Seniors. The topic for study in this course is human behavior in small groups. Human beings do most of their living, working and playing in small groups ranging in formality from family to classroom groups. The relationships among the members of these groups develop through similar stages and by common processes which determine to an important extent the effectiveness of the group in achieving its goal. These stages and processes are a response to two basic human needs: the need for belonging and community, on the one hand, and the need for separateness and individual identity, on the other. The classroom group provides students with a laboratory in which to experience and observe group process. Students read articles in the professional literature and write papers on topics that reflect upon their learning. This course, if failed, cannot be made up by examination.

Science

The diploma requirement in science for members of the classes 1988-1990 is one yearlong course in either biology, chemistry, or physics. However, all students are strongly urged to study in each of these three areas. The order in which biology, chemistry, and physics is taken will have to vary with a student's degree of mathematical sophistication, previous science courses, and interest. Distribution among these sciences may be attained by yearlong courses or term-contained electives. Each department also offers advanced courses for stu-

dents who wish to add depth to their science studies.

Recently, the faculty voted a change in the diploma requirement in science for members of the class of 1991 and for all students entering as of, and subsequent to, September 1988. The requirement is a yearlong course and three additional terms of science. At least one of those terms must be in the biological sciences if the yearlong course were chemistry or physics and, conversely, at least one of the term-contained courses must be in physics or chemistry if the yearlong course were in biology. With the exception of yearlong laboratory courses, one term-contained science course taken as a Junior will count toward the diploma requirement. Two yearlong courses will, of course, fill the requirement as long as one of the courses is in biology and the other is in either chemistry or physics.

For those students entering as Juniors, we suggest that: 1) those Juniors who have already experienced success in a junior high science course consider taking *Chemistry 25*, *Biology 30*, or *Physics 20*, subject to approval by the appropriate department chair; 2) those Juniors who have little science background and who need to develop basic skills should take *Physics 10* or *Chemistry 11*; 3) those Juniors who find themselves more interested in studying science in the context of a particular topic should take *Biology 13*, *14*, *15*, *17*; *Chemistry 12* or *Physics 18*.

Biology

The Biology department offers a number of term-contained courses primarily for Juniors, each of which explores a particular topic through classroom and laboratory or field work. Juniors with strong math and verbal skills who wish to enroll in *Biology 30—0* MUST obtain permission from the department chairperson. Juniors will not normally be permitted to enroll in *Biology 25—0*.

13—3 Introduction to Ornithology (formerly Science 13)

Three prepared class periods and one (double) unprepared laboratory period. The course will cover many of the various orders of Class Aves, concentrating primarily on the songbirds and waterfowl of Eastern Massachusetts. Anatomy, physiology, and behavioral

aspects of the winged world will be supplemented by laboratory field trips to many of the dynamic bird habitats in the immediate area. The course will culminate with a trip to Parker River National Wildlife Refuge (Plum Island) in Newburyport, Massachusetts, an environment rich in migratory and nesting birds.

14—1 Natural History (formerly Science 14)

(8041) Four prepared class periods. Through making collections and field observations, students will become familiar with the more common insects, trees, reptiles, birds, rocks, glacial structures, planets and constellations seen in the Andover area. Techniques in observations, collection and preservation will be stressed. Films and slides on the evolution of the living things we study will complement the classroom portion of the course.

15—2 Oceanography (formerly Science 15)

(8052) Four prepared class periods. The 70% of our earth's surface comprising the oceans is examined from a number of biological, physical and chemical perspectives. Accordingly, we investigate the origin of the oceans and interactions among the thousands of living organisms found in or near the sea. Films and slides complement the classroom portion of the course. Special emphasis is given to the biology of sharks and whales.

16 Ecology (Not offered in 1987–88)

17—1 Introduction to Zoology (formerly Science 17)

(8072) Four prepared classes per week, one of which will be used for laboratory work. This is a one-term course designed for Juniors and Lowers who have not taken *Biology 25* or *30* or their equivalent. A study will be made of the similarities and differences among the major animal divisions from the most primitive invertebrates to the most complex vertebrates. Areas of concentration will include the basic systems of each phylum (*i.e.*, digestion and reproduction), as well as the ecological role and the evolutionary development of the organism. Lab periods will be used to develop techniques of dissection while studying the anatomy of animals from selected phyla.

The Biology department offers two yearlong introductory level courses, each of which satisfies the diploma requirement for a laboratory science. Each course meets four times a week for 3 classroom periods and one double-period laboratory

session which includes training in the use of the compound and stereoscopic microscopes and other laboratory equipment. Laboratory work requires careful observation, mastery of techniques and accurate recording and interpretation of results. Part of the Spring Term is set aside for work on individual or group laboratory projects. Juniors with strong math and verbal skills who wish to enroll in *Biology 30—0* MUST obtain permission from the Department Chairperson.

A student entering Phillips Academy as a Lower, Upper, or Senior who wishes to receive Biology credit on the strength of a course taken in the 9th grade at another school may do so upon passing a validation test to be administered after the student arrives at Andover.

25—0 Introduction to Biology

(8120) This course is intended primarily for Lower Middlers with little previous exposure to science. A topics approach usually centered around laboratory experiences is employed in order to acquaint students not only with fundamental biological principles but also with the methods and techniques used to elucidate them. Attention is paid to the processes by which scientific evidence is gathered, interpreted, and summarized. (This course is not open to Seniors.)

30—0 Biology

(8130) This is a survey course for those students with previous exposure to some of the basic principles of science. It stresses the unity of life, rather than the diversity, by emphasizing the functions common to all living things. It covers, in plants, animals, and microorganisms, the fundamental principles of metabolism (including nutrition, gas exchange, materials transport, excretion, and homeostasis), responsiveness and coordination, reproduction and development, genetics, evolution and ecology.

31—2 Human Biology

(8142) This one-term survey course is for Uppers

31—3 and Seniors who have not had *Biology 25* or

(8143) *30* or previous credit in Biology. It stresses the principles of human physiology includ-

ing: nerve and muscle function, nutrition, gas exchange, material transport, the immune system, excretion, homeostasis, and human reproduction and development. The course will also expose students to recent developments in molecular genetics and their relation to human physiology. This will be a five-hour course with at least one hour each week devoted to laboratory work.

Since the breadth and depth of coverage are similar to that in the Winter Term of *Biology 30*, students who take *Biology 31* will not be able to take *Biology 25* or *30* subsequently. *Biology 31* may be taken for one term only.

36—3 Human Ecology

(8163) Three class periods and one double field or laboratory period each week. For Uppers and Seniors who have completed a yearlong science course. This course will examine ecosystems, energy flow and populations, and will take an interdisciplinary approach to problems of societal concern such as pollution, population growth, environmental ethics, and food supply. It will also give students an opportunity to examine some of the issues raised in the Headmaster's Symposium in more depth through reading, experimentation and field work. A project or short paper will be required.

47—1 Animal Behavior (formerly *Biology 42*)

(8241) Three class periods and one double laboratory period. The course is designed to familiarize the student with the basic principles of animal social behavior. The topics which receive the greatest emphasis are: territoriality, altruism, mating strategies, courtship, parental behavior, migration, dominance, and the evolution of behavior patterns. Throughout the course, an effort is made to relate the behavior of animals to the behavior of humans. A project or a research paper will be required. (This course also prepares students for Advanced Placement questions on behavior.)

For students who plan to take the Advanced Placement Examination, we recommend taking *Biology 51*, *53* and *54*. *Biology 47* will also be useful. Students planning advanced work in biology should also take a year of chemistry and/or physics. *Biology 25* or *30* or their equivalent is a **prerequisite** for *Biology 51*, *53*, and *54*, and a minimum of one term of chemistry is a **prerequisite** for *Biology 53* and *54*. These courses are also open to students who do not plan to take the Advanced Placement Examination.

51—1 Evolution and Ecology (formerly *Biology 41*)

(8251) **Prerequisite:** *Biology 25* or *30* or the equivalent. Three class periods and one double field or laboratory period each week. Evolution is a major unifying theme in biology, and the mechanism of natural selection serves as a foundation for examining ecosystems, energy flow, succession, and relationships between populations. Problems

of societal concern such as pollution, population growth, environmental ethics, and food supply will be discussed. A short library research paper will be required. This course may require more than the standard 4 to 5 hours of homework per week. (This course, *Biology 53* and *Biology 54*, form an Advanced Placement sequence.)

53—2 Molecular Biology (formerly *Biology 43*)

(8262) **Prerequisite:** *Biology 25* or *30* and one term of chemistry or permission of the instructor.

(8263) Three prepared classes and one double laboratory period per week. Following a brief review of chemical principles, the course examines the major classes of biomolecules and how they are synthesized and degraded in the cell. Particular emphasis is placed on those reactions which are associated with energy conversion pathways such as respiration and photosynthesis. Enzyme function is considered both in terms of mechanisms of action and with regard to kinetics. The relationship between structure and function at the molecular level is emphasized in studies of molecular genetics and the control of genetic expression. This course may require more than the standard 4 to 5 hours of homework per week. (This course, *Biology 51* and *Biology 54*, form an Advanced Placement sequence.)

54—1 Human Physiology (formerly *Biology 44*)

(8271) **Prerequisite:** *Biology 25* or *30* and one term of chemistry or permission of the instructor.

(8272) Five prepared classes per week. An in-depth consideration of some of the major systems of the human body, this course offers an opportunity to learn how to read and study from a challenging college level text; the reading is dense, the terminology must be selectively appreciated, and the regulatory mechanisms discussed are complex. Lab work may include the dissection of a cat or fetal pig and appropriate experiments. A short library research paper will be assigned. This course may require more than the standard 4 to 5 hours of homework per week. (This course, *Biology 51* and *Biology 53* form an Advanced Placement sequence.)

Chemistry

11—1 Elements and Compounds (formerly *Science 8311*)

(8312) Open to Juniors and Lower Middlers. Five class periods per week. This course is designed for students who have no background in chemistry. Topics such as elements, compounds, bonding, chemical

reactions, acids and bases, the mole concept, and elementary organic chemistry are introduced. Emphasis is placed on developing familiarity with common substances and reactions, and on the use of symbols and elementary mathematics to describe them. There is frequent laboratory work.

12—1 Introduction to the Geosciences (formerly *Science 12*)

Open to Juniors. Four prepared class periods per week. Laboratory work is accomplished during class periods and involves study of satellite and aerial photos, slides, maps and various specimens. Typical areas of study include volcanoes, fossils, earth resources, oceans, gemstones, crystals and earthquakes.

25—0 Introduction to Chemistry

(8420) **Prerequisite:** Completion of *Mathematics 10* or the equivalent. For Lower Middlers, Upper Middlers and Juniors with permission of the Department Chair, who have NOT completed their Phillips Academy mathematics requirement. Five class periods per week. An introduction to the chemical view of the material world, including atomic theory, atomic structure, chemical reactions, the nature of solids, liquids, gases, and solutions, acid-base theories, electrochemistry, and the chemistry of the organic compounds. Making connections between chemical principles and everyday life will be emphasized. One or two class periods per week will be devoted to laboratory work.

30—0 Chemistry

(8430) **Prerequisite:** Completion of *Mathematics 22* or the equivalent. Three class periods and one double laboratory period per week. This course is an introduction to the theoretical framework of modern chemistry, including atomic structure, chemical bonding, phase changes, solutions, chemical reactions, thermodynamics, kinetics, general equilibria, acid-base equilibria, electrochemistry, and aspects of inorganic and organic chemistry. These topics are treated with greater depth than in *Chemistry 25*. Emphasis is placed on developing problem solving skills and understanding the experimental basis of theories.

31—1 Short Introduction to Chemistry (formerly *Chemistry 41*)

(8442) Open to Seniors who have not had a year of chemistry. Three class periods and one double laboratory period per week. This course surveys the basic principles of chemistry, such as elements and compounds, periodic table, atomic structure, bonding, general reactions, acid-base chemistry, and simple chemical arithmetic.

34—2 Geology (formerly Science 34)

(8452) Four prepared class periods, with two periods used each week for laboratory work. A general introduction to physical geology, to include crystal growth, minerals, measurement of geologic time by radioactivity and fossils, volcanoes, seismology and earth structure, deformation of strata, faults, plate tectonics. Some attention to disasters of geological origin, e.g. earthquakes, tidal waves, eruptions.

36—3 Chemistry of the Environment

(8463) Four prepared class periods. Open to Seniors and Uppers. Lower must have the permission of the instructor. This course is concerned with the effect of chemistry on the citizenry. Current issues — such as acid rain, chemical safety, waste disposal, and air and water pollution — are discussed. Chemical theories and principles are introduced as needed. Laboratory work and periodical readings are integral components. Not open to students who have had a year-long course in Chemistry.

44—2 Chemistry of Nutrition (formerly Chemistry 46)

(8522) **Prerequisite:** One year of biology, chemistry, or physics. Four prepared periods per week. This course will study carbohydrates, fats, proteins, vitamins, and minerals, with respect to their chemical structure role in the human body, and occurrence in food. As well, the connection between diet and disease will be examined. What is the nature of the relationship between fat and cancer, and fat and heart disease? What is the data underlying the fiber hypothesis, the possible protective role of vitamin A, and the claims for vitamin C? Other topics such as sports nutrition, energy balance, and food additives will also be addressed. A short research paper on some topic of interest will be required.

47—3 Organic Chemistry (formerly Chemistry 43)

(8543) **Prerequisite:** Completion of either Chemistry 25 or 30. Three recitation periods, and one double laboratory period. Students interested in medical or biological fields or in additional chemistry must generally wait until the college sophomore year before studying organic chemistry, the chemistry of carbon compounds. This course is a prior introduction to this critically important and fascinating subject.

Organic chemistry is largely non-mathematical and descriptive in nature. Students will use a condensed "minicourse" text, learn many of the laboratory techniques unique to organic chemistry, make use of three-dimensional plastic molecular models, and gain a sound

background in nomenclature, functional groups, bonding, simple mechanisms, typical reactions, and infra-red spectra.

52—12 Advanced Placement Chemistry (T2) (a two-term commitment)

Prerequisites: Chemistry 25 or Chemistry 30 completed with distinction. Four recitation periods and one double laboratory period. This is a rigorous course which treats the topics addressed in Introductory Chemistry in greater depth. It also prepares students who wish to take the Advanced Placement Examination in chemistry. This course may require more than the standard 4 to 5 hours per week of homework.

55—0 Honors Chemistry—Advanced Placement

(8570) **Prerequisite:** One year of physics. Three periods for recitation and two double laboratory periods. This course is open to a limited number of able students, by invitation, who have strong scholastic records in mathematics and physics. No prior course in chemistry is expected. It is essentially the equivalent of a first-year college course, and prepares students for the Advanced Placement Examination in Chemistry. This course may require more than the standard 4 to 5 hours per week of homework.

Physics

10—2 Introductory Physical Science (formerly Science 10)

(8602) Five class periods. Open to Juniors with limited backgrounds in science. The course will deal with some of the basic concepts of physics and chemistry by means of classroom work, problem solving, and laboratory experiments.

18—3 Introduction to Observational Astronomy (formerly Science 18)

(8683) Four prepared class periods, with one period each week used for observation. This course is intended for Juniors and Lower who want to become familiar with the universe in which we live. Topics include a survey of the sky, lunar observation, the origin of the solar system, celestial distances and motions, and a brief introduction to stellar evolution. Students identify constellations, track planets, and learn how to observe using a telescope.

20—0 Physics Honors for Juniors

(8700) Four prepared class periods. **Co-requisite:** Registration in Math 19 or Math 21. This is an

honors course for talented Juniors with a strong interest and background in science and mathematics. Students entering this course should have *mastered* a year of algebra as it is used profusely in solving word problems. There is laboratory work. Successful completion of this course prepares students for *Physics 55*. The text is *Physics* from the Physical Science Study Committee.

25—0 Introduction to Physics

(8720) Five class periods, one unprepared. Open primarily to Lower Middlers. An introductory course in the basic concepts of physics. A less rigorous course than *Physics 30*, it is designed for students with latent mathematical maturity. Students should have completed one year of algebra before enrolling. Successful completion of the course prepares the student for the College Board Achievement Test in Physics.

30—0 Physics, A Survey

(8730) Five class periods. **Co-requisite:** registration in at least *Mathematics 32* or its equivalent. A non-calculus physics course for students with ability in mathematics and science. It includes a study of classical mechanics, wave motion, heat, kinetic molecular theory, relativity, geometrical and physical optics, and atomic and nuclear physics, as time permits. Laboratory work is an integral part of the course.

31—1 Observational Astronomy (formerly Science 31)

(8741) Four prepared class periods, with one period used for observation each week. This course is designed for Uppers and Seniors. Observational astronomy, the study of our solar system and beyond, introduces the most recent developments in planetary and stellar science. Topics such as our sun, the nine planets, comets, meteors, red giants, white dwarfs, supernovae, black holes, celestial mechanics and NASA's space program will be supplemented with laboratory work, movies and one or two nights a week of required telescope use. Students will have the opportunity to do individual projects of their choice, such as astrophotography. Not open to students who have had *Physics 18*.

32—1 Classical Mechanics

(8751) This course covers the same material as the

32—3 first trimester of Physics 30-0.

(8753)

33—3 Electronics (formerly Science 33)

(8763) Four class periods per week. **Prerequisite:** previous completion of or concurrent enrollment in a Physics course, enrollment in at least *Math 34*,

and permission of the instructor. A course in modern solid state linear and digital electronics leading to a fundamental understanding of microcomputer hardware through consideration of circuit elements and their combinations, operational amplifiers, various types of diodes and transistors, integrated circuits, and Boolean algebra and its implementations. There will be considerable laboratory work.

34—2 Cosmology (formerly Science 32)

(8772) Four prepared class periods. This course is open to Uppers and Seniors. Cosmology is the study of the universe as a whole, and its evolution. Topics include galactic structure and large organization in the universe, modern theoretical models, physical evidence, the standard model of the Big Bang, galactic evolution, the search for extra-terrestrial life, and the future of the universe. Telescope observation, movies, guest lectures and a field trip augment the course.

36—3 Electricity, Magnetism and Electronics

(8783) A five-hour course, four prepared, with laboratory work taking place during the regularly scheduled hours. The course will include static electricity and certain static electrical phenomena such as lightning. Current electricity, simple circuits, magnetism, magnetic effects and some basic concepts of electronics will be included. Lasers and photodetectors will be discussed if time permits.

52—12 Advanced Placement Physics (T2) (a two-term commitment)

(8854) Five class periods. **Prerequisite:** An honor grade in *Physics 30* or its equivalent and enrollment in at least *Math 51* or its equivalent. This is a rigorous course in mechanics (Fall term) and electro-statics and dynamics (Winter term). Calculus will be used as required. This course generally prepares candidates for the C-level Advanced Placement Examination in Physics and entrance to honor level programs in physics at the university level. Text: *Physics*, by Resnick and Halliday.

55—0 Honors Physics — Advanced Placement

(8870) Five prepared class periods. Open to talented students who will be enrolled in at least *Math 51*, may have taken a chemistry course and need not have taken any previous physics. If you are interested in this course, you may sign up for it with your academic advisor in the spring or you may request it on your course registration form. The department chairperson will then review your credentials and invite you to join the course or suggest you enroll in *Physics 30*. *Physics 55* prepares students for the C-level Advanced Place-

ment Examination and is a rigorous course emphasizing mechanics and electro-statics and dynamics. This course may require more than the standard 4 to 5 hours of homework per week. Text: *Physics* by Resnick and Halliday.

60—3 Relativity and Quantum Mechanics

(8893) **Prerequisites:** *Physics* 30 or 35 and *Math* 52.

Four prepared class periods. Relativity and Quantum Mechanics are two theories that completely revolutionized man's thinking about the universe. The course is a survey of the basic ideas underlying these theories. Special mathematical techniques needed for a better understanding of the material are developed in the course.

Study Skills

(9502) **Basic Study Skills**

(9503) Four class periods. This course is designed to help students build effective study skills through understanding more about the learning process. Class discussion focuses on the problems of motivation, concentration and retention. Exercises are designed to work on improvement in each of these areas and to develop proficiency in planning studying time, in developing accurate yet flexible reading comprehension, in taking notes and marking books, and in preparing for exams. This course may be taken for at most one term.

(9511) **Efficient Reading Skills**

(9513) Four class periods. Recommended for Upper Middlers and Seniors, this course is designed to teach strategies for increasing reading efficiency and comprehension. It places particular emphasis on techniques for reading textbooks and novels, vocabulary development, and the improvement of comprehension through analysis of assigned readings. This course may be taken for at most one term.

(9522) **Language Skills I**

Four class periods. This course is designed for those students who need supplementary help in overcoming weaknesses in writing, spelling and vocabulary. Specific assignments are geared to the needs of each student. Open only to students who have permission of the instructor.

(9533) **Language Skills II**

Four class periods. Seniors and Uppers who need help in writing essays and research papers may

elect this course for the Spring Term only. Organizational skills, paragraph and sentence structure, and theme development will be reviewed depending on students' individual needs. Students must have permission of the instructor.

(9601) **Typing**

(9603) This course in personal typing is open to all students; it is designed for beginners to learn the keyboard and basic typing skills. There is no charge, but students must supply their own typewriters. This course does not earn academic credit. (Mrs. DiClemente)

Theatre and Dance

All courses are electives, open to the various classes as noted. Courses in theatre are designed for students who wish formal exploration of the elements of stage work and a supplement to (or substitute for) extracurricular work in productions. A variety of experiences is available: some courses result in performance; some courses study theory; some do both. Theatre students are encouraged, though not required, to supplement their classwork by participating in any of the numerous productions mounted each year, or they might be invited to join the Andover Touring Company, which has produced and toured with *Our Town*, *The Fantasticks*, *Scenes from American Life*, *A Thurber Carnival*, *Godspell*, *The Contrast*, *J.B.*, and *The Skin of Our Teeth*.

THEATRE COURSES

21—1 Introduction to Acting

(6511) Four class periods and one hour of movement. Open to all classes. This course is designed for students with little or no acting experience.

(6512) By doing exercises in movement

21—3 and voice production, reading, improvisation, and scenes, a student who is curious

about the theatre may determine whether he or she has ability or interest in acting, while learning something of the process of characterization, the major responsibility of the actor. The emphasis is on the variety of acting experiences rather than on a polished final product. One required trip to a nearby theatre. Text: Hagen, *Respect for Acting*.

22—1 Public Speaking

- (6521) Four class periods. Not open to Juniors. The course has a dual objective: to learn how to speak easily in front of others, and to learn how to speak English well. Students give prepared and extemporaneous speeches on a variety of topics while studying diction, pronunciation, projection, organization, and other techniques of good speaking.

26—13 Technical Theatre

- (6561) Two double periods. Open to all classes.
(6562) Through practical experience in designing, building, and lighting for plays currently being produced, students learn the elements of stagecraft, including set construction, stage rigging, and the use of lighting instruments and gels. For the Fall Trimester emphasis will be on stagecraft; for the Spring, lighting.

32—2 Intermediate Acting

- (6622) Four class periods. Prerequisite: *Theatre 21*, or departmental permission. Building upon the principles of acting introduced in *Theatre 21*, this intermediate acting course consists of detailed scene work and improvisation, exploring the relationship of the actor to his audience and to his fellow actors and focusing on the creation of dramatic moments, both with and without scripts. The course considers various acting styles, in an effort to guide the actor toward a greater understanding of his responsibility on stage: to see to what degree he can remove himself from himself while creating truthful characterizations.

51—1 Acting and Directing Workshop

- (6711) Two double periods. Prerequisite: *Theatre 21* or 32, or departmental permission. Uppers and Seniors only. The course serves two kinds of students: those who wish as actors to study plays and characters in greater depth and those who wish to study the principles and techniques of directing, the most complex

of theatrical tasks. While everyone will do some acting, only those people who express a desire to experiment with directing will do so. Class members work with manageable scenes from classical and contemporary periods, reading theories of acting and directing, studying various performance styles, and examining methods of scene interpretation.

52—123 Play Production

- (6721) Four double periods. By audition. This course is oriented toward the performance of a significant work by an important playwright. Recent choices have been *The Sea Gull*, *The Little Foxes*, *Macbeth*, *As You Like It*, *The Hostage*, *Hamlet*, and *Ten Little Indians*. The total time requirements for this course (classtime plus homework) may exceed the standard 9 hours per week.

53—2 Playwriting

- (6732) Four class periods. Open to Uppers and Seniors. Each student is expected to write at least one one-act play in addition to certain exercises in monologue, dialogue, and scene setting. The class reads aloud from students' work-in-progress while studying the formal elements in plays by important playwrights and by reading selected literary criticism focused on drama.

DANCE

25—123 Introduction to Dance

- (6801) Four prepared class periods. Open to all classes. A formal course in movement and composition which introduces the serious student to the vocabulary and other elements of dance through active participation. The emphasis is not ultimately on public performance, but on the process and the discipline of modern dance. (Ms. Brecher)

Phillips Academy
Andover, Massachusetts 01810



ANDOVER
Catalog 1987-88

The material in this catalog is intended to provide general information concerning Phillips Academy, Andover, rather than a complete record of any one year. It is not in any manner contractually binding, and the information herein is subject to revision and change.

Andover

Catalog



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Phillips Academy,
Andover, Massachusetts,
better known as Andover,
is an independent,
coeducational, integrated
and non-sectarian
institution offering a
variety of academic
programs for high school
students.

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Introduction to Andover



Phillips Academy in 1778

In 1789 the first scholarship monies are recorded, from John Phillips, "in consideration of further promoting the virtuous and pious education of Youth, (poor children of genius and of serious disposition especially) in Phillips Academy, founded in Andover, Massachusetts."

Today, approximately 38% of the student body benefits from financial aid in the form of outright grants or loans; Andover has been able to implement an aid-blind admission policy for the last two years, ensuring a broad diversity within the student body.

When Lu Jianghong arrived on the Andover campus last September, she entered an unfamiliar world. She had traveled for two days to attend a school which she had never seen. A twelfth grade student, she had never before ventured beyond her home province of Manchuria in the People's Republic of China. She and her parents, professors at the Harbin Institute of Technology, were anxious to have her experience the West and obtain a type of education unavailable at home. She applied to a special exchange program between the Institute and Andover, and was one of three top students accepted to travel to the United States to study at Phillips Academy for one year.

Jianghong was not alone in finding Andover very different from her home. She and her two classmates from Harbin became part of a student body of over 1200 young men and women, either returning to school or beginning a new chapter in their educations. They joined students from Guatemala, New York, and Lawrence, Massachusetts, who all found themselves a little scared, and very excited.

Jianghong was undoubtedly aware of the eclectic mix of her peers at her new school. What she may not have known was that in encouraging her to consider Andover, the Academy was fulfilling a mission which is well over two hundred years old. Since 1778, when Samuel Phillips, a gunpowder manufacturer for General Washington's army founded an academy to be "ever equally open to youth, of requisite qualifications, from every quarter," Andover's goal has been to gather young people from a broad range of experiences and provide them with the tools for a life of leadership and service.

The school Jianghong attends is very different from that of her Andover predecessors in the 18th century: the first class consisted of thirteen pupils from surrounding villages meeting in a rough shed. Today students come from over 28 countries and virtually all of the 50 states and territories to a campus of over 500 acres, where extraordinary modern facilities mix with school buildings more than one-hundred-fifty years old. Andover today enjoys two heritages: in 1973 Phillips Academy merged with neighboring Abbot Academy (est. 1829), one of the nation's oldest and most distinguished schools for young women. Now, part of the Abbot campus makes up one of six

clusters—residential “schools within a school” of approximately 200 students each, designed to provide a smaller, more intimate social community within the larger context of the whole school.

Jianghong came to Andover on a full scholarship. “Youth from every quarter” still means not only talented young people from a variety of geographic, racial and religious backgrounds, but also students from a wide range of economic situations. This year, as in the past, Andover was able to admit all new students without reference to their ability to pay the tuition. Through a strong program of grants and loans, awarded according to need, Andover may invite students exclusively on the basis of talent. Students who come to Andover bring to this campus not only academic ability, but also artistic, athletic, and creative strength. Over two thousand young people gather at Andover every year: in addition to the twelve hundred who attend the traditional school term for periods of up to four years, some eight hundred more spend the summer with us in the Andover Summer Session or various programs and institutes under its umbrella.

Andover is a residential school offering a twenty-four-hour learning experience. Young people in this community learn almost as much from peers as from teachers, particularly in a setting where there is no disjuncture between classroom and the outside, between school and home. Teachers at Andover are strong personalities, talented individuals of energy and well-considered values—instructors who work in the classroom, on the playing field, and in the dormitory. They approach students as whole people with real opinions, struggles, joys and concerns. The faculty in this community not only teach scholarship, they live it. An English teacher may be a professional photographer, a house counselor may use his evenings to finish his second off-Broadway play, and a field hockey coach may also be a highly regarded biogenetic research scientist. Like the students, Andover teachers bring to this school a broad range of talent to offer the community.

Students come to Andover at a particularly significant time in their lives. What we expect from them is much like what Eliphalet Pearson expected from his students in 1778: a willingness to share their experience, to use their talents, and to be open to consideration of new ideas. Whether from Bangkok or Boston, young people must have the resources to establish their own success, refine their goals and visions of the future and build the courage to lead in a world where communications have made the world more accessible and international issues more acute. One of the reasons that Andover sought a formal exchange with the People’s Republic of China is our commitment to creating a community in which

people from different cultures can develop a common understanding; where young people at a critical time of decision-making can learn firsthand, through programs Andover offers, about what it is like to live in Senegal or work in Washington, D.C.

When Jianghong leaves Andover she will enter an American university. Wherever she goes, she will carry with her a set of experiences unique to having studied at Andover. For her, and for all young people who join our community, we want that experience to have been a challenging, constructive and joyful time in their lives.



Headmaster Donald W. McNemar



Andover Life

A Beginning



In 1782 Paul Revere was commissioned to make the Phillips Academy seal. Revere engraved the educational faith of Andover's founders—"The end depends upon the beginning"—around the symbols of the rising sun and the hive of industrious bees. The founders' religious and patriotic commitment to the common good is symbolized by the second motto, "*Non Sibi*"—"not for one's self."

A Purpose

If you come to Andover today, you will not have to go far to see a building designed by Charles Bulfinch or named for Nathan Hale. You might take computer graphics in a modern arts and communications center, discuss African history in an archaeology museum, or study the War of 1812 in a building constructed before it took place. Your roommate might be from Brazil or Tennessee. You might learn how to play squash, how to be a DJ in a radio station or how to run rapids in a kayak. In any case, you will be expected to make the most of who you are. Andover students benefit from a careful combination of independence and support. There are no formal study halls; there are no "lights out." You alone are responsible for what you accomplish, but there are many people who will help you. Teachers in a residential setting are close by, either to chat or to review the math problem you did not understand in class. Professional study counselors stand ready to help you manage your time and give you advice on how to polish the term paper due next week. Your house counselor will be there to feed you when you're hungry, encourage you on your cycling, or teach you how he or she mastered irregular French verbs. The opportunities and support are here for students who demonstrate a strong sense of responsibility and independence.

Phillips Academy is committed to providing a rigorous education to qualified and promising students from a wide range of ethnic, economic, and geographic backgrounds. Andover's education reaches beyond a rigorous curriculum in intellectual and artistic disciplines; although academics remain the first priority, the faculty strive to enhance the whole student. The school believes that young people deserve a diversified program in competitive athletics and physical education to foster agility, endurance, resilience and sportsmanship; that students must be made aware of issues surrounding physical and emotional health; that the entire community must have the opportunity to flourish spiritually



The Abbot Bazaar, begun in May of 1920 at Abbot Academy to celebrate the original opening of the school, continues today as an annual outdoor carnival and rite of spring for Andover students. The Bazaar includes a dunking booth (traditionally occupied by the Headmaster), facepainting, tag sales, and picnicking.



through the exercise of religious beliefs; and that students should be encouraged to involve themselves in the larger community to develop responsibility and social concern. Through all of these means, Andover's goal is to challenge young people to use these resources innovatively, and to develop the qualities and skills necessary for sound leadership.

The school is designed to encourage both young women and young men to develop such qualities. Through the curriculum, athletics, and student leadership, Andover's commitment to coeducation continues to evolve, changing to meet the needs of all young people. In the winter of 1986, the Board of Trustees published the results of a two-year interdisciplinary study on coeducation at Andover. Initiated at the tenth anniversary of the merger between Abbot and Phillips Academies, the study is a compilation of historical trends and community attitudes with regard to many gender issues on campus. With regard to course content, teaching style, athletics and residential settings, the study generated both praise for our progress, and an agenda for the immediate future to fully serve the 1200 students under our care.

The Place

The school is located on a hilltop in the town of Andover, a 35-minute bus ride from Boston and Cambridge. It is well situated for easy access not only to the historical, cultural and entertainment offerings of the Greater Boston area, but to the beaches and mountains for which northern New England is justly renowned.

Phillips Academy was the first boarding school to be incorporated in the United States (1780). During its more than two centuries the school has grown in size from a single rude building and a few acres of land to an extended campus of 160 buildings on over 500 acres.



The People

Students

There are approximately twelve hundred young men (55%) and women (45%) in Andover's regular session, of whom about one-fifth are day students. More than eight hundred others attend the various programs and institutes of the Academy's Summer Session.

Andover students are divided into four classes: Seniors, Upper Middlers, Lower Middlers and Juniors—our traditional terms for 12th, 11th, 10th and 9th graders. Some are here for four years, most for a shorter time, but they all have two things in common: intelligence and the willingness to use it.

Faculty

The faculty number approximately two hundred; two-thirds hold advanced degrees at the master's or doctorate level. Andover teachers teach not only in the classroom, but on the field, in the dormitory, and through numerous extracurricular clubs and activities as well. They demand as much of themselves as of their students: among a myriad of responsibilities to the school, the faculty find time to be authors, research scientists, photographers, prize-winning poets, theological scholars, and professional musicians.



The Work

If you come to Andover, you have the ability to accomplish all that is expected of you academically, but come prepared to work hard. For every hour spent in class, students here are expected to complete approximately one hour to an hour-and-a-quarter of preparation. Students at Andover must complete a required core of studies which the faculty feels is essential to a liberal education. This includes three years of language; a full year of a physical science with laboratory; three years of mathematics; a year of United States history with a required additional term of elective history; a term each of music, visual studies, religion/philosophy and physical education; one year of English competence and one year of general literature. Requirements for a diploma vary according to the level at which a student enters the curriculum, and are described fully in the *Andover Course of Study*. Beyond this framework, students choose their own courses with the guidance of an academic advisor. The school encourages all students to construct a curriculum which reflects breadth, depth and balance, and to take advantage of the hundreds of elective courses available.

A year, a week, a day

Andover operates on a trimester system, offering about 285 separate courses that vary in length from one trimester to the full year. The year begins in late September and ends in mid-June, with breaks at Thanksgiving, Christmas and in the early spring.

Classes are held on Monday, Tuesday, Thursday, and Friday, the full class days, and on Wednesday morning and every other Saturday morning.

Wednesdays and Saturdays are half study days with no afternoon academic appointments. On alternate Saturdays there usually are no morning classes and Sunday is totally free. This flexible weekly schedule provides time for independent study, for special projects, for informal as well as regularly scheduled sports, shopping in Andover, or occasional trips to Boston. Social events during the week are limited by the demands of the academic program, but the weekend program on campus includes dances, concerts, movies, plays and informal activities.

Participation in athletics is required of all students, and athletics and activities are scheduled four afternoons a week for two hours each. On Wednesday and Saturday afternoons, varsity and junior varsity teams participate in interscholastic competition.

Meals are served in Commons, our fifty-year-old central dining hall, composed of four handsome, traditional dining halls and four completely modern serving areas. The cost of meals is included in the fees of both boarding and day students.

The Daily Schedule

7:15 a.m.	Commons opens for breakfast
8:00 a.m.	Five, 50-minute morning class periods. A student is likely to have four morning classes, each meeting four or five times a week.
11:00 a.m.–	
1:30 p.m.	Lunch at Commons
1:45 p.m.–	
3:45 p.m.	Sports
4:10 p.m.–	Two afternoon class periods: most students have one afternoon class.
6:10 p.m.	
5:15 p.m.	Commons opens for supper.
6:45 p.m.	Evening activities: Chorus rehearsal, Drama Lab plays, club meetings, etc.
8:00 p.m.	Evening study begins
10:00 p.m.	Students in own dorm

An individual student is likely to have one morning period and one afternoon period free each day, depending on course and laboratory schedule.

Most students are eligible to take a day excuse each week and, after the first two weeks of the year, overnight excuses beginning after their last scheduled weekly appointment.

Course work is intensive and involves about twenty-five hours of outside preparation each week. Required athletics or afternoon activities total approximately six hours each week. In addition, all students are required to participate in the school's work program, performing assigned tasks, supervision or leadership responsibilities two hours each week. Despite the amount of time that must be spent on academic pursuits, most students become very involved in extracurricular activities and social events. The school encourages independence and personal responsibility: there are study hours but no study halls, and decisions about the use of one's time are largely left to the judgment of the individual.



Residential Life



On any given weekend, social events on campus could include at least one dance, a movie, coffeehouse or concert, and a theatre production in the Drama Lab. The Del Fuegos (above), called by *Rolling Stone* magazine one of its "New Artists of the Year" in 1985, performed at Andover last spring. They are Woody Geissmann, Tom Lloyd '79, Dan Zanes '79, and Warren Zanes '83.

Dorms and Clusters

Boarding students live in dormitories with faculty house counselors and their families. Although these buildings vary in size and house from four to twenty-four students, all are small enough to encourage close relationships among students and between students and house counselor. One-third of the students live in single rooms; two-thirds in large double rooms. The larger dorms are likely to have students from at least three classes.

For many students, dormitory life is one of the most valuable aspects of their time at Andover. Whether it's planning a pancake breakfast or studying for a history mid-term, sharing it with people from very different backgrounds or from foreign lands is a rewarding learning experience.

Dormitories are grouped into six geographical units called "clusters," each including girls' and boys' dorms, about two hundred students from all classes, and twenty to thirty faculty families. Clusters create the personal atmosphere of a small community in which everyone knows everyone else and people do most or many things together. The cluster system is the heart of Andover's residential life, bringing the advantages of a small school to an institution that already has the advantages of size.





The clusters have considerable autonomy; teachers and students together manage their own affairs under the leadership and supervision of a cluster dean, who works closely with the Dean of Residence. Each cluster has its own academic counseling, student officers, discipline system, intramural athletics and informal social activities.

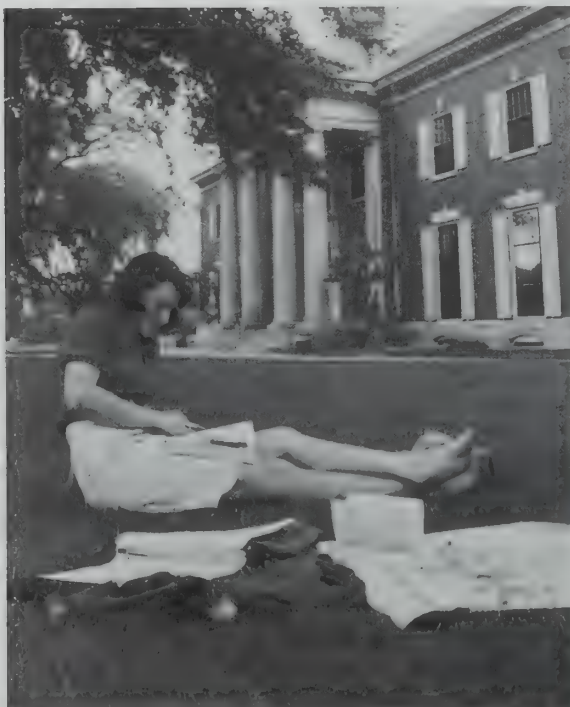
A faculty member is responsible for administering the student work program, which is designed not only to develop a sense of community responsibility for the daily operation of the school, but also to help the school reduce its operating costs. Working two periods a week, all students share the jobs of cleaning the dormitories, returning books to library stacks, serving as office helpers and laboratory assistants, and performing other essential tasks. In addition, all residents of a given dormitory are responsible for keeping its entries free of litter, snow and ice.

The clusters take turns each week working in the dining hall, seniors serving as overseers. Seniors have many other supervisory roles, including cluster and school offices, editorial boards of student publications, club leadership, and other assignments serving the Phillips Academy community.

Counseling and Discipline

Those who are not accustomed to a residential school may at first be surprised by the degree of independence an Andover student is given. Along with that freedom come rules and procedures necessary to protect the rights of individuals and to enable the school to achieve its ends. Existing rules have a dual purpose: to preserve the necessary order in the community so that effective learning can take place, and to teach students that individual freedom can be achieved only through due consideration for others. Incoming students and their parents are provided with a copy of the *Academy Blue Book*, summarizing rules and regulations; all students are held responsible for its contents.

The resident house counselor is the faculty member most directly responsible for the students in a dormitory, working with them on both a personal and academic level. Parents can expect to hear from the counselor at regular intervals and are encouraged to turn to this faculty member for information about a student's progress.



Each cluster dean supplements the work of the house counselor and is available to students and parents for information and advice. Other support staff include academic advisors, who help students in the cluster plan their academic programs, and the College Counseling Office, which assists all seniors with their future educational plans.

Graham House serves the community in several ways. The staff offers psychological counseling, study counseling, study skills courses, student tutorial services, the Psychology Department curriculum, consultation to faculty and staff, and specialized workshops in response to residential needs.

Discipline is handled at the cluster level and involves the cluster dean, house counselor, other faculty and student representatives. Offenses involving a student's integrity, social offenses that threaten the well-being of other individuals or the school community, and continued infractions that indicate an unwillingness to come to terms with the demands of the school—all render a student liable to dismissal. Cluster recommendations for suspension or dismissal are made to the headmaster, who makes the final decision. Examples are dishonesty, the possession or use of alcoholic beverages or illegal drugs, and unauthorized absence from school bounds. Students may not possess, rent or drive any motor vehicle within school bounds; bicycles are permitted. Andover does not allow smoking, unless students have completed a school administered course on the health hazards involved and have parental permission.

In a community such as Andover, all must commit themselves to the goals of the community and to loyalty to each other. Since education at Phillips Academy is both intellectual and humane, students and faculty derive mutual support from sharing of themselves and their ideals.

Trust and responsibility have many interpretations; these words have become hackneyed from overuse and misunderstanding. But the ideas they embody—sensitivity to others, willingness to explore and respect differing points of view, charity and humility in expressing judgment, readiness to cherish friendship, to depend and to be depended upon—are nonetheless fundamental. Such values can scarcely be legislated and can only be imperfectly defined. Yet the health and happiness of everyone in the community depend on consideration and awareness, restraint and candor, discretion and shared joy. Collaboration toward these imprecise but worthwhile ends is an expectation which all at the Academy hold.

Only boys and girls who feel that they can live happily with the rules and guidelines of Phillips Academy should apply for admission.



In the early 1930's Abbot alumnae parents tried to persuade Principal Bertha Bailey to abandon the required long black stocking worn with the girls' gym bloomers. To this request she steadfastly refused: "I don't like legs."



Harriet Beecher Stowe, author of *Uncle Tom's Cabin*, and her husband, a Seminary professor, lived in Stowe House. She is buried in the school cemetery. Mrs. Stowe, who shocked the strict Congregationalist community by giving parties and entertainments for students, was suspected of going to the theater and even of having "Episcopalian leanings."

Claude M. Fuess, *An Old New England School*

The Campus Ministry

Reflective of a diverse student body, the religious ministry at Phillips Academy is also diverse. Priest, minister, and rabbi serve the ongoing liturgical and celebrative needs of the Roman Catholic, Protestant, and Jewish students on campus; the chaplains also teach, counsel, and help organize a variety of community service and social action projects for the entire campus. To meet the needs of students from other spiritual traditions, opportunities are provided for reflection, meditation, and fellowship in a variety of settings.

Activities

Extracurricular activities are an important aspect of a student's education, and Andover offers a rich fare, thanks to the diversity of interests in the student body. From the Chess Club to the Computer Club, it seems that all Andover students do something special in their free time.

Many of the activities are service-oriented; the Community Service Program places student volunteers in area nursing homes, elementary schools, a youth center and other agencies. Closer to home, the Tour Guide Association handles the responsibility of conducting campus tours for the Admission Office. Older students who are members of the Tutorial Program offer help to fellow students in academic difficulty. The student radio station, WPAA (91.7 FM), is on the air from 6:30 a.m. to 11:30 p.m. daily, serving the local listening area as well as the student body. *The Phillipian*, the Academy's prizewinning, student-run weekly newspaper, is wholly uncensored; students lay out the paper and do their own typesetting, as well as write the articles and headlines. The *Pot Pourri*, the school yearbook, and the school literary magazine, *The Mirror* (Robert Frost was an early contributor), provide more opportunities for those with a literary bent.

Cultural organizations include the Afro-Latino-American Society, the Asian Cultural Society and others; course-related groups range from the Astronomy Club to the German Club. The Chapel Fellowship, the Newman Club and the Jewish Student Union support the ecumenical ministry in providing active religious communities for Andover students.

At any time during the week, actors and directors will be working on a main stage play or on a student production in the Drama Lab; the Andover Political Economy Club may be listening to a State Department official discuss the Middle East; the Natural History Club may be bird watching on an ocean beach or—if the season is right—the Ski Club may be on its way to the White Mountains of New Hampshire.

Many students make extensive use of school facilities in their free time, whether or not they are affiliated with a club or organization. The Arts Center is a major focus of school life—darkrooms are used almost around the clock, and students and faculty interested in painting, metal sculpture, ceramics or design make use of the center's studios and workshops in their free time. The Music Department also provides facilities for students interested in pursuing music beyond the classroom.

There is no limit to the variety of extracurricular activities at Andover. Students who do not find an existing club or organization that meets their needs are encouraged to start one.

Undergraduate Organizations (Clubs)

Afro-Latino-American Society
 All That Jazz (vocal jazz group)
 Amateur Radio Club/W1SW
Andover Forum (current events publication)
 Asian Society
 Astronomy Club
 Beatles Fan Club
 Blue Key Society
 Bridge Club
 Cercle Francais
 Chapel Fellowship
 Chess Club
 Chorus
 Community Service
 Computer Club
 Cyclocross Club
 Dance Club
 Equestrian Club
 8 'n 1 Club (singing group)
 Fidelio Society (madrigal singing society)
 German Club
 The Heartland Coalition
 Just Ordinary Komediens Everywhere
 Jewish Student Union
 The Leaky Pen (satire club, with publication)
The Mirror (literary magazine)
 Model United Nations Club

Mohgul Society (Indian Society)
 Natural History Club
 Newman Club
 North Carolina Club
 Nuclear Awareness/Education Club
The Phillipian (student newspaper)
 Philomathean Society (debating society)
 The Photography Club
 Political Economy Club
Pot Pourri (yearbook)
 Press Club
 Scuba Club
 Ski Club
 Strategic Gamers Guild
 Tertulia (Spanish club)
 WPAA (student radio station)





Educational Resources

The Oliver Wendell Holmes Library

At the center of Andover's intellectual life is the 102,000-volume Oliver Wendell Holmes Library, named after the famous doctor and poet who was a member of the Class of 1825. The stacks are open to students. In addition to academic work, students and teachers use the library to explore new fields of interest and to read casually.

The library subscribes to over 260 American and foreign periodicals and daily papers from cities throughout the country. A microfilm file of *The New York Times* is available. Particular library treasures are the Jansson Atlas, printed in Amsterdam in 1657, papers and books of Oliver Wendell Holmes, and one of the world's leading collections of Vergiliana.

The Addison Gallery

The Addison Gallery of American Art operates both as a museum in the traditional sense and as an art center for the school and the community. In addition to organizing exhibits of American art from the collection, the museum staff originates exhibits of contemporary painting, sculpture, photography, video, film and crafts. Seminars bring artists in close contact with students to discuss contemporary art issues. In cooperation with Phillips Academy's Music Department, concerts by faculty and students are produced in the museum.

The holdings of the museum are recognized as a distinguished specialized collection: Allston, Copley, Morse, Stuart, West and others represent the Colonial period. Of special importance among the many paintings of the nineteenth century are examples by Cole, Doughty, Eakins, Homer, Inness, LeFarge, Ryder, Twachtman and Whistler. The early part of the present century is shown in the work of Bellows, Davies, Demuth, Hassam, Hopper, Luks, Marin, Prendergast and Sloan. Contemporary artists are represented by works of Calder, Lippold, Moholy-Nagy, Hofmann, O'Keeffe, Pollack, Shahn, Wyeth and others.



Sidney Smith, class of 1985, as the President of the Afro-Latino-American Society on campus helped to found NEALSA, the New England Afro-Latino Student Alliance, an organization to promote communication and interaction among students of color at independent schools. NEALSA continues today with many social events among member schools and an annual conference.



The Robert S. Peabody Archaeology Museum

The Robert S. Peabody Foundation for Archaeology has conducted major archaeology research in this hemisphere for the last seventy-five years and has published many reports of its scientific investigations. The Foundation maintains a museum which cares for many famous collections based on some of the most important archaeological expeditions undertaken in the Americas. The laboratories of the museum are used in teaching and illustrating the Foundation's research. Mature students may undertake special study projects which involve the use of the Foundation's collections and library resources.

The Cochran Sanctuary

The Moncrieff Cochran Sanctuary is a sixty-five-acre tract of rare beauty located so close to the center of school activity that it is in fact an extension of the campus. Landscaped areas planted with dogwood, azalea, rhododendron and laurel provide a succession of bloom that draws many visitors from late April to mid-June. A brook and two ponds attract nesting ducks and geese, and extensive natural wild areas, varied in terrain and plant life, provide nesting places for many species of land birds. Cross-country runners and skiers make extensive use of the Sanctuary, as does the Academy's Search and Rescue program.





The Academic Departments

The Curriculum

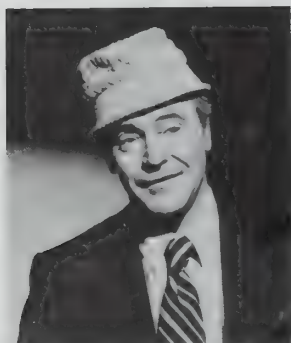
The curriculum of Phillips Academy contains both a required core of studies believed to be fundamental to a liberal education and elective courses designed to fit the special needs and interests of the individual student. Instruction is given in all subjects required for entrance to higher institutions, whether liberal arts or technical. All departments offer courses beyond the level of preparation for college.

Classroom groups are small enough to permit individual attention; the average class size is fourteen. Students are placed in sections fitted to their attainment and, through accelerated sequences and advanced courses, are encouraged to progress at a rate commensurate with their ability and ambition. Many students fulfill requirements ahead of the normal year, increasing their choice of college-level courses and other elective opportunities. Andover's trimester system provides flexibility and variety in the curriculum and allows various combinations of independent work and off-campus projects.

Every student is assigned to an academic advisor, who helps in the selection of courses that will meet Andover's diploma requirements, college entrance requirements and the student's particular interests. With the approval of the academic advisors and house counselors, students may request their instructors and sections. However, the school cannot guarantee that students will be able to have their desired selections.

The curriculum and diploma requirements are described in detail in the *Course of Study*, which will be sent upon request to each preliminary applicant and to others who would like to receive it.

THE ARTS



During his second and third years at Andover, Jack Lemmon's grades were suffering due to his overpreoccupation with theatrics and composing. Though things looked very bleak in his senior year, he applied himself diligently and made what he thought was an astounding reversal. Against all odds he was able to graduate. When Headmaster Claude Fuess handed the proud young Lemmon his diploma, he said, "A remarkable change. I'm truly impressed, Bill."

Visual Arts

At the heart of the art program is a concern that all students learn to see freshly and accurately, that they learn how to organize their efforts to make something happen, that they develop a critical eye for the coherence of their environment, all these with an independent mind.

The diploma requirement in art is as follows: Juniors and new Lower Middlers must take a trimester course in studio art; an entering Upper Middler must take a trimester course in studio art or music. Andover attempts to balance structured, problem-solving courses like the basic Visual Studies, with more adventurous advanced courses, organized around longer-term projects. For a student who desires several terms in art or design, the courses are here, whether the student's objective is a professional school, Advanced Placement in a liberal arts college, or simply a strong basis in a traditional area of general education.

The superb facilities of the Arts and Communications Center—fully equipped wood and metal shops, two complete photo labs, print-making equipment, painting and drawing studios, a kinetics studio, computer graphics labs, video studio—are supplemented by the several kilns available to ceramicists. The department welcomes extracurricular use as well as work related to courses, and faculty members are on hand every evening to encourage the idea that whether it's painting or computer graphics, the Arts Center is the place to go.

Theatre and Dance

Courses in theatre are designed for students who seek formal exploration of the elements of stage work and a supplement to (or substitute for) extracurricular work on plays. A variety of experience is available; some courses are performance oriented; some are theory oriented; some are both. All combine classroom and workshop sessions; students work out practical theatrical problems together under the guidance of an instructor. Drama, as well as dance, both modern and ballet, may be elected as an alternative to athletics, once a year.



George Washington Hall, capable of handling audiences of one thousand, includes a flexible, professionally equipped proscenium stage. It has a full fly system, accommodation for numerous lighting instruments and an elevator/pit. Recent main stage productions have included *The Me Nobody Knows*, *Cabaret*, *The Time of Your Life*, *Twelfth Night*, *Macbeth*, *Our Town*, and *Camelot*.

The Drama Lab, also in George Washington Hall, is a "black box"—an intricate arena/workshop with excellent lighting facilities, suitable for audiences of not more than seventy-five. Although main stage plays are usually directed by a member of the faculty, the Drama Lab allows students to direct plays themselves and to experiment with dramatic styles. A sample of productions from recent years includes plays by Albee, Ionesco, and Pinter but original student work is also performed here.

Theatre students are encouraged—but not required—to supplement their classwork by participating in any of the numerous productions mounted each year.

Music

The Music Department faculty consists of five full-time and several part-time instructors. Other highly qualified instrumentalists are available to teach voice, piano, organ, classical guitar, brass, percussion, strings, and woodwinds.

Andover offers courses for the beginner as well as for intermediate and advanced students both at the applied level (study of musical instruments or playing in a musical organization) and in the history, appreciation, and theory of music.

The Nature of Music, or Music 20, is the diploma requirement in music, and a prerequisite for most courses in the history, appreciation, and theory sections. A more advanced three-part course, Theory of Music, runs in sequence throughout the year.

Graves Hall, the department's newly renovated home, has large rehearsal halls for concerts as well as many individual practice and ensemble rooms, music classrooms, teaching studios and an electronic music studio. Graves Hall also houses

the Timken Recital Hall where faculty, guest, and student recitals take place. The Department also has a large, up-to-date record library and listening room.

The Chorus has a fully equipped rehearsal room and a library of music literature in the Cochran Chapel, a short distance away. The Chapel also houses two new organs for the use of beginning and advanced organ students. One is located in Kemper Chapel; the other, in the main chapel, is a 30-stop, double manual, tracker action instrument.



VISUAL ARTS

Introductory Studio Courses

Visual Studies
Visual Studies for Juniors
Introductory Design
Introductory Ceramics
Introductory Photography

Intermediate Studio Courses

Visual Studies (Art 10) is a pre-requisite for all intermediate courses.

Drawing
Animation
Drawing and Two-Dimensional Design

Two-Dimensional Design
Three-Dimensional Design
Intermediate Photography

Advanced Studio Courses

Visual Studies (Art 10) is a pre-requisite for all advanced courses.

Graphics and Photography
Studio Photography
Painting
Filmmaking
Advanced Ceramics
Printmaking

Advanced Photography

Sculpture
Photo Illustration
Large Format Photography
Photo Journalism
Kinetics
Architecture
Contemporary Communications
Calligraphy: The Art of Lettering by Hand
Advanced Placement in Studio Art
History of Art: Painting and Sculpture
History of Art: Architecture

MUSIC

Applied
Beginning Instruments
Recorder Ensemble
Brass Ensemble
Woodwind Ensemble
String Ensemble
Fidelio Society
Band
Chorus
Chamber Orchestra
Private Instrumental and Vocal Lessons

The Nature of Music
Developing Musical Skills
Opera Seminar

History and Appreciation
Independent Study in the History and Literature of Music

Jazz
Popular Music in America

Theory
Orchestration and Conducting
Theory of Music I
Theory of Music II
Theory of Music III
Electronic Music
Advanced Techniques in Electronic Music

THEATRE AND DANCE

Theatre
Introduction to Acting
Public Speaking
Acting and Directing Workshop
Stagecraft
Play Production
Shakespearean Workshop
Playwriting

Dance
Introduction to Dance

CLASSICAL STUDIES

The chief aim of the Department of Classics is to help students rediscover the sense of order and ideals which has been the glory of the ancient world of Greece and Rome. Through its elective courses in Classical Studies, taught in English, students can survey the history and the thought of Classical Civilization and its influence and importance to their experiences in the world we face today.

CLASSICAL STUDIES

Greek Civilization
Roman Civilization
Etymology
Ancient History
Classical Mythology

ENGLISH

Convinced that level of achievement is more important than the number of years a subject is studied, the English Department has established modest but firm diploma requirements. Students must prove themselves competent in writing and reading through the English Competence course and, by taking the Literature Sequence, acquire a sense of the depth and breadth of their literary heritage. For students who enter in the 9th grade, English 10: The Journey, which is a preparation for the Literature Sequence, is also required.

Once the student has successfully completed the diploma requirements, opportunities multiply. Students may enroll in any of the Literature Sequence courses that they have not yet taken, or they may study any of the advanced or specialized courses offered by the department. Seniors may also qualify for an independent project supervised by the teacher of their choice.



ENGLISH

Introductory Courses

English 300 (for Seniors and Postgraduates)

Required Sequence Courses

English Competence (three terms)

Lit B, The Satiric View, The Tragic View or The
Mythic View (two terms)

Lit C, Shakespeare (one term)

Elective Courses

(Only courses with sufficient enrollment will be
given.)

Irish Studies

British Writers

American Writers

Introduction to Writing

Afro-American Literature

James Joyce

Man and God

20th Century Drama

Shakespeare: The Man, The Times, The Theatre,
The Plays

Satire and Comedy

Novel and Drama Seminar

Creative Writing

The Short Novel

Milton and Spenser

Chaucer and His Age

Wit and Poetry in the Seventeenth Century

Images of Women



Graceful Bulfinch Hall (1819) has been in Academy use for more than 150 years as a recitation hall, gymnasium, and dining hall and now houses Andover's English classes. Dr. Oliver Wendell Holmes, class of 1825, immortalized "the classic hall" in his poem, "The Schoolboy," written over 100 years ago for the Academy's Centennial Celebration. In 1984, Bulfinch received a full interior restoration, to reflect its original early 19th century design.

HISTORY AND THE SOCIAL SCIENCES

Courses in the Department of History and Social Sciences are based on the conviction that a well-informed citizenry is essential to the function of a republican society. Classes rarely rely on a single textbook. Instead, students work with a variety of paperbacks, monographs, library-reserve books, and films. All courses emphasize both the mastery of subject matter and the acquisition of skills that will serve the student throughout life. Close attention is given to textual reading, note-taking, and the preparation of oral and written reports.

Courses for Juniors focus on the concept of historical continuity and change. They use a multi-disciplinary approach, emphasize world geography, and devote one day a week to the study of contemporary affairs. Topics studied include the Kalahari San, Darwin, Protestant and Moslem revolutions, and the industrial revolution in the Merrimack Valley. During the Lower year, American and European biography courses focus students' attention on significant individuals in history. Frederick Douglass, Lenin, and Gandhi are among those studied.

In the Upper year, most students take three terms of United States history which, together with a fourth term of non-United States history during the Senior year, satisfies the department's diploma requirement. A Senior may choose from a variety of survey courses; histories of Africa, East Asia, the Middle East, Russia, Latin America, and an Introduction to Economics are some of the offerings. In addition, Seniors who have completed the diploma requirement may take advanced seminars in topics related to United States history. Courts and Constitutional Development, a Social History of American Families, International Relations, Race Relations, and Nuclear Weapons are among the possibilities.

In the required United States history course and in several of the Senior electives, students write extensive research papers, using government documents, newspapers, letters, diaries, interviews—the raw materials of history. For qualified Uppers and Seniors, there are two programs of special interest: a student may

spend the spring term in Washington, D.C., working as an intern in a congressional office, or may join the Urban Studies Institute, which involves both course work and field work centering on the city of Lawrence.

HISTORY AND THE SOCIAL SCIENCES

Social Science

American Race Relations
History and Mathematics
International Relations
Introduction to Economics
Issues in Economics
Men, Women, and American Culture
Modern American Presidency
Nuclear Weapons

History

Africa and the World
American Biography
American Urban History
Ancient History
Continuity and Change
Courts and Constitutional Development,
1935–1985
East Asia: China, Japan, and Foreign Relations
European Biography
Latin American Studies
Modern Europe
Social History of Families in America
Social History of the Middle Ages
The Middle East
The Russian Experience
The United States
Topics in the History of Phillips Academy and
Abbot Academy
Tudor England
United States History for Foreign Students
Victorian England



MATHEMATICS

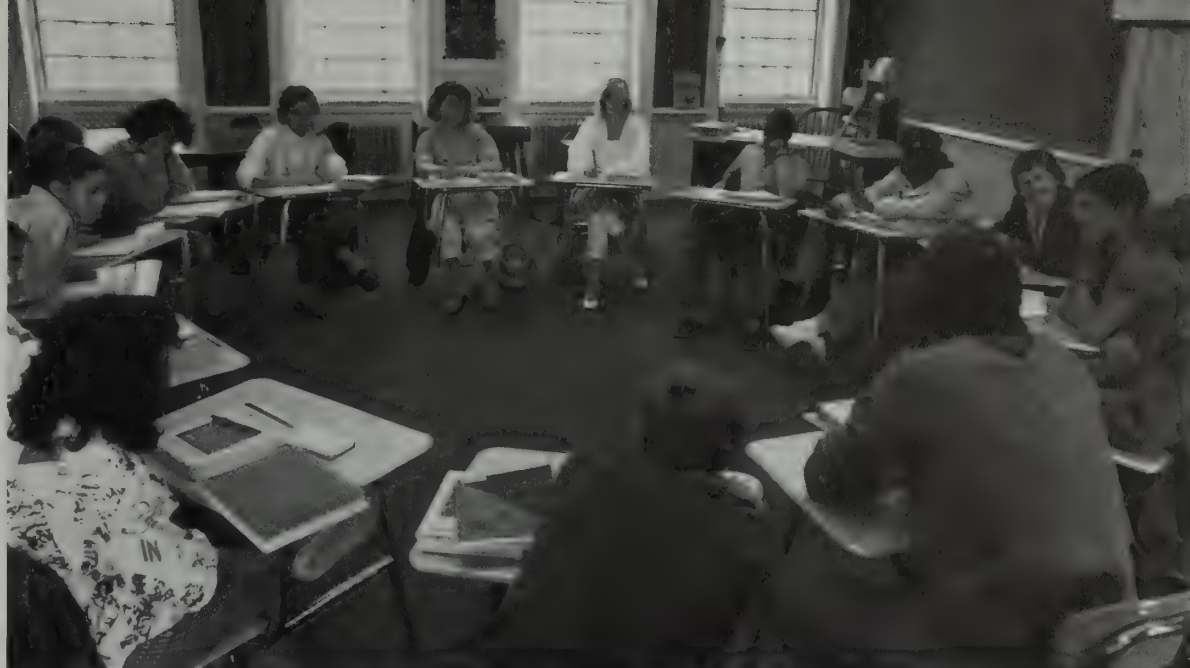
Mathematics at Andover is addressed to several overlapping audiences within the student body: the future citizen of late twentieth century society, immersed in a culture which has been shaped to a large extent by mathematical perceptions of reality; the future user of mathematics, whose vocation may depend upon special knowledge of a mathematical sort; and the future mathematical scholar, who may turn his or her energies and curiosity to the organization of mathematical knowledge.

The mathematics curriculum is built around a core sequence of eight trimester courses, three of elementary algebra, two of geometry, one of intermediate algebra, and two of precalculus topics, completion of which will satisfy the diploma requirements. An additional trimester is required before entering calculus. Students whose previous course was elementary algebra will take *Geometry* unless our placement test indicates a need for further work in algebra first. Those who enter with one year of algebra and one year of geometry will satisfy our diploma requirements by taking intermediate algebra and the first two precalculus trimesters unless the

placement test shows a need for *Algebra Consolidation* first. The latter course prepares the students to take the precalculus courses the following year. There are a variety of special courses designed for new students who fall between the above criteria.

The department also offers many elective courses, descriptions of which may be found in the *Course of Study*. Over one-third of all mathematics is taken electively, much of it in preparation for the Advanced Placement Examination in calculus. These courses include the study of elementary and advanced calculus, analytic geometry, infinite series probability, statistics, computer science, linear algebra and vector analysis.

The Mathematics Department is located in Morse Hall, which also houses two computer rooms. One room has 19 IBM Personal Computers (networked) and the other has 12 Apple IIe computers. A variety of computer courses are offered that range from an introduction to computers to preparation for the Advanced Placement test in Computer Science. Computer languages taught include APL, LOGO, and Pascal.



The community of students who like math at Andover is sizeable. They share their curiosity and knowledge by offering to tutor other students at the school, and by participating in interscholastic competition under the aegis of the Math and Computer Clubs.

MATHEMATICS

Courses leading to satisfaction of the diploma requirement

Elementary Algebra

Algebra Review

Geometry

Algebra Consolidation

Intermediate Algebra

Precalculus

Elementary Functions

Elective Courses

Calculus

Computer Programming: beginning, intermediate and advanced

Linear Algebra and Vector Calculus

Probability

Statistics

Discrete Mathematics

FOREIGN LANGUAGES

As long ago as 200 B.C. the Latin poet Ennius used to say that because he knew three languages he had three hearts. Andover can render no finer service to today's world than to send forth its alumni with many hearts, ready and able to feel for, to understand, and to respond to the millions of people who speak languages other than English.

Acknowledging the importance of foreign languages, Andover requires for the diploma three years of an ancient or modern language. The ancient foreign languages offered are Greek and Latin, the source languages of Western thought and literature. The modern foreign languages offered are Chinese, French, German, Italian, Russian and Spanish. Emphasis is on the spoken word, and the foreign language is the basis for all communication in the classroom. Small classes make possible maximum participation, with supplementary practice provided by our versatile language laboratory. There are

opportunities to join accelerated classes which complete, for example, the work of four years in three.

At the 4th-, 5th- and 6th-year levels the study of literature may be supplemented by courses in the art, history, geography and music of the foreign country. In upper-level courses students can prepare for Advanced Placement Examinations in language and literature and qualify for advanced courses when they enroll in a college. Superior students may carry out independent projects, including apprentice teaching, under careful guidance.

At all levels of study progress in the foreign language is facilitated, and the resources of the classroom are expanded, through occasional use of communication media (periodicals, radio, etc.) and such activities as the staging of plays, the use of the school's radio station for broadcasts in foreign languages, festivals, language tables in the dining room, movies, clubs, visits by performing groups, and trips to language events in Boston and at nearby schools and universities. Students are urged to consider opportunities, sponsored by Andover or by other schools, to live and study abroad.

For Andover's School Year Abroad program, see page 44.

Chinese

Traditions in China are deep and have been unfamiliar to Western eyes and ears for centuries. In the modern world we have a shared future. Understanding and learning the Chinese language is a key to that future. Andover is one of very few secondary schools to commit itself to a fully integrated, four-year program in Mandarin Chinese.

French

Before the outbreak of the French Revolution, French was considered the universal language of the West. It was the language of diplomacy, was already flourishing as a literary medium and, because of its clarity and precision, reflected both French culture and philosophy, influencing the development of democratic institutions in the United States as well as in other countries. The

study of French rewards the student with the ability to communicate with French-speaking peoples and to appreciate the importance of order in expression, broadening his views through a growing familiarity with the rich and lively literature and civilization that the language represents.

German

German is central Europe's principal language, and knowledge of it opens up an understanding of European culture and affairs. Students may learn German to read the works of Goethe, Schiller, Lessing, Kafka, Hesse, Brecht and Grass in their original form, or to follow the arguments of Hegel and Nietzsche, or perhaps to understand more intimately the background of modern socialism and democracy in the world. Many of the most important developments in modern physics, electronics, chemistry and engineering were originally published in German, and American businesses are realizing increasingly the importance of personnel able to speak German.



Greek

Through the study of Greek, the Department of Classics offers students a feast at the banquet of the first and still most relevant literature of the Western World. Through direct experience with such men as Homer and Plato, students will discover a sense of order and ideals in the expectation that they may apply it, in turn, to the challenges they face today. Greek, as one of the languages chosen to fulfill the diploma requirement, is often elected by students as a second or even third language in conjunction with Latin or a modern language. It remains an important basic course for students with a deep interest in literature or philosophy.

Italian

The growing popularity of Italian in American schools and colleges reflects a growing awareness of the charm of the Italian language and of the rich cultural heritage which it serves. Andover's intensive course for Seniors attracts students with rich experiences in other languages, is conducted in Italian, and has the scope and pace of a course for college freshmen.

Latin

Latin—still? Yes, as futuristic nightmares and present turmoils are reawakening a search for order, perspective and ideals in the human experience, names like Cicero, Vergil, and the *pax Romana* not only symbolize great milestones in that search but also suggest habits of mind that produce enduring greatness—the same habits of mind that show up so clearly in a sentence, paragraph or entire work of Latin literature.

Through the study of Latin the Department of Classics offers students direct experience in Latin literature, both in the original and in translation,

FOREIGN LANGUAGES

Italian offers an intensive introductory course for seniors. All other languages offer introductory and intermediate courses, with opportunities for acceleration at those levels. Students are

then eligible for the following courses:

Chinese
Literature, Philosophy and
Language Review
Literature, History and Current
Events

which is rightly called the mother tongue of Western Civilization. Latin, as one of the languages frequently chosen to fulfill the diploma requirement, is also often chosen as a second or third language. It is a particularly valuable experience for students of other European languages who have an interest in doing advanced study in foreign languages.

Russian

Approximately forty percent of Russian secondary school students are learning English. A fraction of one percent of American secondary school students study Russian. For cooperation, understanding, and influence, our doctors, diplomats, scientists, and businessmen should be able to communicate with Soviet counterparts in Russian.

Since secondary school is the best place to begin, Andover has established a rich program for our beginning as well as our advanced students.

Spanish

The Spanish Department is anxious to help students discover the varied cultural heritage of the Spanish-speaking world through intensive study of the language, both spoken and written.

It seems particularly important to learn a language spoken everyday by millions of Americans across the U.S. In addition, Hispanic literature, from Cervantes to Borges, has played a vital role in world literature, as attested by the frequency with which Hispanic writers have been awarded the Nobel Prize for Literature.

Students who enter the professions will find Spanish an indispensable tool. But whatever they do, Spanish will be the key to a richer, more rewarding life.

French

Language and Review and
Contemporary French Life
Selected Readings
Village Français
French Civilization
Conversation and Phonetics
Written Expression

Literature and Film: French
Theatre
French Literature
French History
French Civilization Outside of
Europe
Québec et les Québécois
Stylistics
Advanced Placement
Contemporary Literature

German

Literature, Composition and
Conversation
Language and Literature for
Advanced Placement
Special Topics

Greek

First Year: basics of language and
culture
Accelerated First Year: two years
in one
Second Year: Xenophon, Plato,
New Testament

Third Year: Homer and Eu-
ripides
Fourth Year: Sophocles,
lyric poetry, Thucydides

Latin

First Year: basics of language and
culture
Accelerated First Year: two years
in one
Second Year: Cæsar, Ovid, Nero
Third Year: Cicero, Vergil,
Apuleius
Fourth Year: Vergil, Suetonius,
Catullus
Fifth Year: Vergil, Tacitus, Pliny,
Horace

Russian

Literature, Composition and
Conversation
Advanced Literature, Composi-
tion and Conversation
Russian Press
Literature

Special Topics

Russian History and Literature

Spanish

Second and Third Year, Ad-
vanced, with winter term in
Mexico
Spanish Language Review
Aspectos de la Cultura y Civil-
ización del Mundo Hispánico
Introduction to Literature, with
Grammar Review
Literature and Culture, with
Grammar Review
Literature for Advanced Place-
ment
Advanced Studies in Literature
Special Topics: Literature,
Sociology, Culture
Latin American Studies



PHILOSOPHY AND RELIGIOUS STUDIES

The department seeks to initiate students into three distinctive and interrelated human quests: the search for meaning, the search for justice and the search for the foundations of knowledge. The process of initiation is intended not only to provide an introduction to outstanding literature in the field but also to assist the student in effecting personal appropriation of the search and in developing the necessary qualities and skills for its pursuit.

The department is committed to exploring these basic human concerns with imaginative empathy and by means of dialogue and rational inquiry, so far as these may take us. It seeks to encourage growth in understanding and empathy among different cultures, traditions and social groups. Beyond this the department is not committed to any particular pattern of expression or response to the area of study. No topic, subject or pattern is excluded a priori. Decisions on course offerings and academic projects take into account the interests and background of the students and faculty and the potential for furthering general departmental goals.

Courses are term contained, involve four prepared class periods and are offered at various levels on the following topics:

The Biblical World View
The New Testament Perspective
Religious Discoverers
Varieties of Religious Experience
Introduction to Non-Western Religions
Introduction to Ethics
Proof and Persuasion
Responses to the Holocaust
Views of Human Nature
Law and Morality
Bioethics
Nonviolence in Theory and Practice
In Search of Meaning
Existentialism
In Search of Justice
Great Philosophers

SCIENCE

Archaeology

The staff of the Robert S. Peabody Foundation for Archaeology offers Andover students an introductory term-contained course in archaeology. The course deals with the prehistoric development of civilization and with archaeological theory and method. The Foundation maintains a museum which cares for many famous collections based on some of the most important archaeological expeditions undertaken in the Americas.

Biology

Andover provides ample opportunity to develop interest in the biological sciences. In addition to two yearlong courses in introductory biology the department offers four courses on the advanced placement level and four elementary courses which are particularly well suited to serve younger students. The introductory courses give students a general background and an understanding of some of the current trends in biology. Field trips, laboratory work, independent projects, lectures, slides, films, and video tapes are all part of the courses. Most of the laboratory work performed during the spring term is devoted to independent projects.

The term-contained advanced courses prepare students for the Advanced Placement Examination. These courses review some of the material presented in the introductory courses as well as introduce new concepts and techniques. The advanced laboratory work gives students experience with the techniques of chromatography, electrophoreses, spectrophotometry, centrifugation, statistical analysis and dissection. Computer simulations are also used on the Science Division's Apple II microcomputers.

Bird watching trips are sponsored occasionally throughout the year by the Natural History Club for interested students who may or may not be enrolled in a biology course. A small zoo, consisting of rats, mice, gerbils, and various reptiles is maintained in Evans Hall. Its population varies with student interest, the reproductive rate of the animals and the dietary needs of



the resident boa. In the basement of Evans Hall there is a superb bird collection on loan from Harvard University and an extensive shell collection is exhibited in various parts of the building.

The Evans Hall greenhouse is a refreshing place to visit during the long winter months. Students grow plants there or start potted plants for their own rooms. An environmental growth chamber is available for those interested in experimenting with photoperiodism.

Chemistry

A variety of Chemistry Department offerings are designed to suit the range of interests and abilities of the students in their study of the composition and interactions of the physical world. Three levels of yearlong courses introduce students to atomic structure, elements, chemical reactions, bonding, gases, liquids, solids, solutions, thermochemistry, kinetics, acids and bases, electrochemistry, nuclear reactions, and organic molecules. There are Advanced Placement offerings for one year or two years of study. In addition, a series of term courses are offered

in such areas as general chemistry, organic chemistry, chemistry of nutrition, environmental chemistry, chemical research, and, for ninth graders, introduction to elements and compounds.

Because chemistry is an experimental science, the observation and interpretation of chemical phenomena are central in the curriculum. Students perform laboratory experiments related to course work, observe classroom demonstrations, and study such societal issues as acid rain, the greenhouse effect, and chemical reactions in technological applications.

The department has the equipment for the usual experiments in elementary syntheses and analysis, including analytical balances, visible and infrared spectrophotometers, pH meters, and vacuum tube voltmeters. Microcomputers are conveniently located in the Roscoe E.E. Dake Computer Room in Evans Hall.

Physics and Astrophysics

The Physics Department offers several introductory courses at various levels of difficulty in order to meet the needs of Andover students. Some representative topics are mechanics, waves, heat, electromagnetism, light, and "modern physics." Laboratory work, classroom demonstrations and extensive problem solving enable students to develop both a qualitative and quantitative understanding of the concepts of physics. Also offered are courses including geology, electronics, astronomy, relativity and early quantum theory, and university-level Advanced Placement physics.

The Physics Department operates the Thornton Observatory which houses a research-grade 16-inch reflector, a 6-inch Brashear refractor and six other portable telescopes. These instruments are used in astronomy courses as well as in project work; recent projects have included such areas as solar, lunar and planetary study; astrophotography; computer simulations; and orbit analysis.

The department is well equipped with laboratory and demonstration equipment such as an air track to eliminate friction, photogates for precise timing, cathode ray oscilloscopes for a multitude of

uses, and computers for rapid data analysis, word processing or programming. These items and many more are available and used in classroom demonstrations and student laboratory work.

Past student projects have included laser transmission of information, holograms, the construction of an electronic calculator, speed of light measurements, determinations of the electronic charge and mass, interferometer measurements, and finding the gravitational constant.

PSYCHOLOGY

The Psychology Department offers a variety of elective courses which examine fundamental concepts in the field. Particular emphasis is placed on helping the student explore the interface between psychological knowledge and personal growth. This is accomplished by utilizing teaching strategies which integrate formal academic work with frequent opportunities for student participation and self-exploration. The introductory level courses offer an overview of the fundamental ideas and classic experiments in psychology and consider the complexity of social development. The advanced level courses examine how individuals behave in groups and how healthy relationships are formed and maintained.

ARCHAEOLOGY

Archaeology

SCIENCE

Introductory Physical Science

Introduction to Biological Science

Astronomy—the Solar System

Oceanography

Ecology

Introduction to Zoology

Animal Behavior

Observational Astronomy

Cosmology—The Universe

Beyond the Solar System

Geology

Biology

Introductory Biology

Anatomy and Physiology

Chemistry

Elementary Introductory

Chemistry

Introductory Chemistry

Research in Chemistry

Elementary Organic Chemistry

Advanced Placement Chemistry

Honors Introductory Chemistry—Advanced Placement

Physics

Introductory Physics

Advanced Physics

(B-level, Advanced Placement

C-level, Advanced Placement)

Electronics

Relativity and Quantum

Mechanics



Dr. Charles Abbot, Class of 1891, a solar energy pioneer and head of the Smithsonian Institution for many years, predicted in the early 1940's that solar energy would become the primary source of power when oil and coal were depleted. In 1972 he received his last patent, for a device to convert solar energy into electricity, shortly before his 100th birthday.

PSYCHOLOGY

Introductory Psychology

Human Relations

Human Sexuality

Group Theory and Process

OTHER COURSES

INTERDISCIPLINARY

Study Skills

Efficient Reading

Language Skills

PHYSICAL EDUCATION

All Juniors and new Lower

Middlers are required to elect one trimester of P.E. 10 in addition to their regular athletic commitment.

Physical Education



Complementary Programs

Andover's complementary programs combine a number of innovative ideas designed to promote better coordination between public and private education nationally. The concept behind these programs is that of multiple schools. While one school may be accepted as the "home-base" diploma-granting institution, several other institutions may be utilized as complements to this school. Thus far, the multiple schools idea has taken form in several program models which are open to Phillips Academy students as well as students from other schools.

The Andover Summer Session

The Andover Summer Session is a short, intensive academic program in which both innovative and traditional courses are taught in only six weeks. Courses in all subjects and at all levels demand hard work—harder work than most students have ever before experienced. Besides English, modern languages, mathematics, history, and the sciences, the curriculum offers such opportunities as Play Production Workshop, Social Psychology, Great Philosophers, Law and Morality, Modern Astronomy, Archaeology, Oceanography and Marine Biology, and Economics.

Other features of the Summer Session are special courses in writing, including the nationally known "Competence in Reading and Writing" (developed at Andover); an expanded ESL Program (English as a Second Language) for foreign students who wish to achieve English fluency; a Chamber Music Program which provides a unique opportunity for able music students in all combinations of piano, strings, winds, and voice, including individual instruction, small ensemble work, orchestra, and chorus; and an intensive Studio Art program for serious students of the visual arts who wish to develop a portfolio in preparation for the Advanced Placement Examination in Studio Art.

The Summer Session makes use of all the school's facilities and is open to able boys and girls from all parts of the country and abroad. Applicants must be graduates of the 9th, 10th, 11th or 12th grades. A catalog can be obtained by writing:

Phyllis Powell, Director
The Andover Summer Session
Phillips Academy
Andover, MA 01810
Tel. 617/475-3400, ext. 170

(MS)²: Math and Science for Minority Students

The (MS)² Program—Math and Science for Minority Students—offers black, Hispanic, and American Indian students three consecutive tuition-free summers of intensive study of mathematics and science. Ninth grade boys and girls are selected on the basis of their superior ability and strong interest in mathematics and science and financial need. The goal of the (MS)² Program is to prepare minority students to compete successfully for admission to selective colleges and for careers in science, engineering and medicine. Further information can be obtained by writing:

Victor C. Young, Director
(MS)² Program
Phillips Academy
Andover, MA 01810
Tel. (617) 475-3400, ext. 293

Students currently enrolled at Phillips Academy's regular session are ineligible to attend the Andover Summer Session or the (MS)² Program. Students attending the Andover Summer Session or the (MS)² Program may not apply for admission to the Academy's regular session for a full calendar year.



Randy Pepper, an instructor in English, author, and a contributing photographer to *National Geographic* magazine, created a new course in the 1985 Summer Session entitled "Oceans." A combination of marine biology, environmental studies, and oceanography, the course includes four weeks of study in the labs at Andover, and two weeks "in the field," sailing along the New England coastline aboard the 55' schooner *Madame Sarah Abbot*, named for the founder of Abbot Academy.

The Short Term Institutes

Andover holds a series of Short Term Institutes which are intensive courses of study in a single subject, designed to offer high school students a unique residential learning experience. First begun in 1974, the Institutes offer a program in Art during the winter term and special summer Institutes within the context of the Andover Summer Session. These Institutes are designed to provide intensive study in a particular field at Andover and to complement a student's home school program, not to compete with it.

School Year Abroad

School Year Abroad offers to qualified Upper Middlers and Seniors a full academic year of living and studying in France or Spain. Originated by Andover, SYA is now jointly sponsored by Andover, Exeter and St. Paul's School. The program gives American students the advantages of living in a foreign culture without sacrificing progress at their home schools or strong preparation for college. Students live with host families, participate in the activities of local athletic and social clubs, and pursue a course of study (both in English and Spanish or French) under the supervision of sponsoring school teachers. SYA offers over two weeks of group travel, all college boards, and provides full academic credit, permitting students to graduate from Phillips Academy with their own class. School Year Abroad is financially independent of its sponsoring schools. Financial aid is available. A catalog can be obtained by writing:

Woodruff W. Halsey II, *Director*
School Year Abroad
Phillips Academy
Andover, MA 01810

Other Off-Campus Programs

Andover offers several complementary residential programs. The Washington Intern Program, sponsored by Andover and Phillips Exeter Academy, allows a group of Upper Middlers and Seniors to spend the spring term in Washington working in the offices of U.S. Senators and

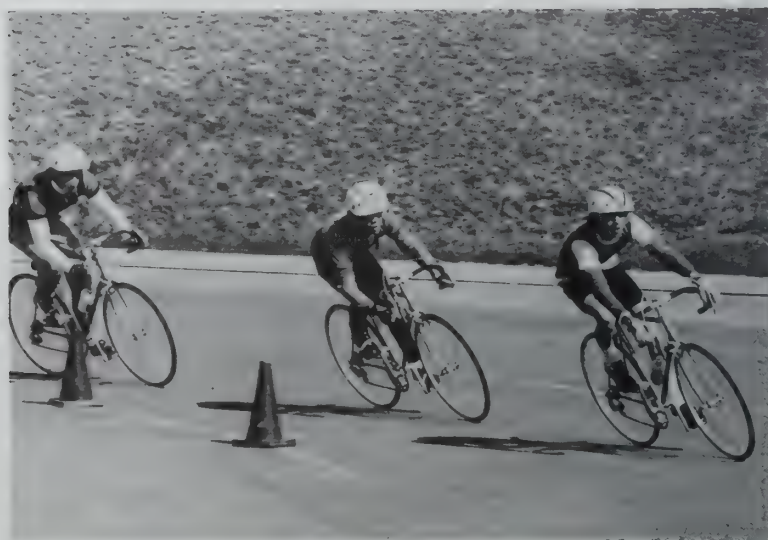


Representatives. Phillips Academy tuition, fees, and financial aid do not cover the cost of this program.

The Mountain School Program of Milton Academy is a semesterlong program for eleventh graders which offers students the opportunity to enjoy a different living and learning experience on a 300-acre farm in Vermont. Phillips Academy students may participate fall term only. Students will continue their academic courses in addition to activities which will emphasize practical skills and crafts. Students will work on the Mountain

School farm which supplies most of the food and heat for the school.

In addition to school-sponsored programs, Seniors may arrange off-campus projects related to their special interests. Some have worked as interns with officials in local government and members of the Massachusetts legislature, while others have carried out projects in the arts under the supervision of professionals outside the faculty. Development of such projects depends upon individual initiative and careful planning of a course of study that will meet diploma requirements and free a block of time during the term.



Athletics



Following the merger of Abbot and Phillips Academies in 1973, the girls began to share more than the classroom with the boys. The first Phillips Academy Girls' Varsity Ice Hockey team was formed in 1977, and continues today with matches against many independent schools, colleges and universities in New England.

In sports, as in studies, students are expected to meet basic requirements and are given wide choice in broadening and deepening their skills, interests and dedication in athletics.

Upon arrival, all new students are given a swim test, and those who do not meet the requirement must take swim instruction as their fall afternoon sport. Juniors and new Lower students take a challenge-based Physical Education Course five hours a week for one term in addition to afternoon athletics. While taking this course, students are tested for physical aptitude and instructed in safety, health, and exercise physiology.

The required afternoon athletic program includes a wide variety of offerings in varsity and junior varsity competitive interscholastic sports, in intramural cluster-organized athletics and in instructional, recreational and fitness activities. New students are strongly encouraged to participate for at least one term at Andover in a team sport or a dance performance program.

Upperclassmen have the opportunity to substitute an activity or project for one term of athletics a year. Each spring the department offers an evening Senior Life Saving course and a Water Safety Instructors' course, in addition to required athletics, for those swimmers who wish official accreditation.

The school maintains several athletic facilities which include 12 playing fields and 25 tennis courts; the Borden, Memorial and Abbot Gymnasium Complex with swimming and diving pools, basketball and squash courts, weight training room and other conventional gym spaces; the

newly renovated Case Memorial Cage with its indoor track; the Sumner Smith Hockey Rink; the crew boathouse on the Merrimack River; the ski trails and jump at Holt Hill; and finally the Search and Rescue Room in Evans Hall which provides the base of operations for Andover's popular outdoor program.

Phillips Academy is committed to a required athletic program that provides a variety of sports and activities to its students. The Academy discourages overspecialization in sports at this age level; the athletic program is a complement to, not a substitute for, the academic curriculum. The Athletic Department oversees the program and its facilities with the support and advice of the Faculty Athletic Committee and the Student Athletic Advisory Board.

Isham Health Center

Phillips Academy employs a full-time physician/medical director, a licensed nurse-practitioner,

and twelve registered nurses to staff Isham Health Center. Isham has approximately 600 inpatient admissions and 7500 outpatient visits per school year. There are two dentists and a full time dental hygienist who are available for routine care and emergencies. A sports medicine clinic is run weekly by a board-certified orthopedic surgeon, in conjunction with three full-time athletic trainers who supervise rehabilitation, practices and athletic competitions. A dermatology clinic is held monthly and a registered dietician is available for consultation with students upon request. The Graham House Counseling Center employs three psychologists, who are available to students seven days a week.

The Isham staff maintains close contact with approximately forty medical and dental specialists in the greater Lawrence and Boston communities, who are readily available for consultation. Isham Health Center also welcomes requests for follow-up and continuing care from students' home physicians.

ATHLETICS

FALL TERM

Boys

Ballet
*Ceramics
*Community Service
Crew
Cross-Country
Cycling
Football
Jogging & Fitness
Karate
Modern Dance
*Music
Paddle Tennis
*Photo Field Trips
Search & Rescue
Soccer
Squash
Swim Fitness
Tennis
Water Polo
Yoga

Girls

Ballet
*Ceramics
*Community Service
Crew
Cross Country
Cycling

Field Hockey
Jogging & Fitness
Karate
Modern Dance
*Music
Paddle Tennis
*Photo Field Trips
Search & Rescue
Soccer
Squash
Swim Fitness
Tennis
Volleyball
Water Polo
Yoga

WINTER TERM

Boys

Ballet
Basketball
*Ceramics
*Community Service
*Drama
Fitness
Gymnastics
Hockey
Jogging & Fitness
Modern Dance
*Music
Paddle Tennis
Search & Rescue

Skiing:

Competitive (Alpine and Nordic)
Recreational (Cross Country)
Squash
*Stage Crew
Swimming
Track
Wrestling
Yoga

Girls

Ballet
Basketball
*Ceramics
*Community Service
*Drama
Fitness
Gymnastics
Hockey
Jogging & Fitness
Modern Dance
*Music
Paddle Tennis
Search & Rescue
Skiing:
Competitive (Alpine and Nordic)
Recreational (Cross Country)

Squash

*Stage Crew
Swimming
Track
Yoga

SPRING TERM

Boys

Ballet
Baseball
*Ceramics
*Community Service
Crew
Cycling
Golf
Jogging & Fitness
Karate
Lacrosse
Modern Dance
*Music
Recreational Cycling
Search & Rescue
Softball
Squash
*Stage Crew
Team Cycling
Tennis
Track
Yoga

Girls

Ballet
*Ceramics
*Community Service
Crew
Cycling
Golf
Jogging & Fitness
Karate
Lacrosse
Modern Dance
*Music
Paddle Tennis
Recreational Cycling
Search & Rescue
Softball
Speedball
Squash
*Stage Crew
Team Cycling
Tennis
Track
Yoga

*Activities in place of sports are available one term a year to upper-classmen



In the 1840's the widow of Principal Osgood Johnson devoted herself to the care of sick Seminary students at Samaritan House, built and named for that purpose, now a student dormitory. In spite of this, rows of gravestones mark the toll of epidemics. An Academy graduate of 1890 reports that no such care as Widow Johnson's was available to the Academy students of the 1890's: "There was no infirmary. If you were ill, it was nobody's business but your roommate's, who brought you meals from Marland's unappetizing fare."

CALENDAR 1987-1988

Fall Term

Sept. 9, Wed.	Faculty return
Sept. 13, Sun.	New students arrive and register
Sept. 15, Tue.	Old students return and register
Sept. 17, Thurs.	Classes begin
Oct. 16, Fri.	Mid-term academic review
Oct. 23-25 Fri.-Sun.	Parents' Weekend (all parents)
Oct. 26, Mon.	No classes
Nov. 24, Tues.	Thanksgiving vacation begins, 1:00 p.m.
Nov. 30, Mon.	Thanksgiving vacation ends, 8 p.m.
Dec. 7, Mon.	Classes end, 8 p.m.
Dec. 12, Sat.	Christmas vacation begins, 12 noon

Winter Term

Jan. 5, Tues.	Christmas vacation ends, 8 p.m.
Feb. 5, Fri.	Mid-term academic review
Feb. 8, Mon.	Mid-winter holiday (no classes)
March 4, Fri.	Classes end, 8 p.m.
March 11, Fri.	Spring vacation begins, 12 noon

Spring Term

March 29, Tues.	Spring vacation ends, 8 p.m.
April 25, Mon.	College Visiting Day (no classes)
April 29, Fri.	Mid-term academic review
May 30, Mon.	Classes end 1 p.m.
May 31, Tue.	Spring trimester examinations begin, 8 a.m.
June 3, Fri.	Spring trimester exams end, 6 p.m.
June 5, Sun.	Commencement
June 9, Thurs.	Spring trimester academic review meeting, 9 a.m.
June 10-12 Fri.-Sun.	Alumni Reunions
July 7, Thurs.	Summer Session begins
Aug. 17, Wed.	Summer Session ends

Admission

"Youth from Every Quarter"

The School's *Constitution*, written in 1778, states that Andover "shall be ever equally open to Youth of requisite qualifications from every quarter." With this principle in mind, the basic requirement for admission to Andover today continues to be evidence of sound character and strong academic achievement. The school is especially interested in candidates who demonstrate independence, maturity and concern for others, in addition to high performance in particular studies or activities. Valuing diversity in its student body, the school seeks to bring together a community from all parts of the country and from many nations.

The school's endowment covers approximately one-third of the cost of an Andover education. Therefore, in fact, every student receives financial aid. In addition, because of the generosity of a large number of alumni and friends, further financial assistance is available (see Financial Aid Section, page 52).



APPLICATION PROCEDURE

Priority will be given to those candidates who complete the application procedure, including the interview, by February 1. A decision from the Admission Committee will be mailed on March 10. The possibility of admission is considerably lessened for all applicants who complete the process after February 1, and decisions for this group may not be rendered before May 1. A deposit of \$300 is required to reserve a place at the time admission is offered to an applicant.

If you have a question:

About Andover's admission or application procedures, call or write the Admission Office.

About an appointment: call or write the Appointment Secretary, Admission Office.

To request a catalog, call or write:

Admission Office
Phillips Academy
Andover, Massachusetts 01810
Admission Office direct line
(617) 475-9353

Academy switchboard
(617) 475-3400 x 596

Office hours: Monday through Friday, 8:30 a.m.
to 4:30 p.m.
Saturday, 8:30 a.m. to 12:00 noon,
October 1 through January 31

Left: Office of Admission and Financial Aid:
Pictured l. to r., top row: Peter L. Drench,
Admission Officer; Clement Morell, Director of
Financial Aid. Middle Row: Grace H. Taylor,
Administrative Assistant; Rebecca Carr, Admis-
sion Officer. Front Row: Betsy Eaton, Admission
Officer and Admission Alumni Coordinator;
Bobby Edwards, Admission Officer; Jeannie F.
Dissette, Dean of Admission.
Not pictured, Greg Simon, Admission Officer.

STEPS TO BE COMPLETED FOR APPLICATION

Submit the Preliminary Application

Card and the non-refundable \$20 fee as soon as possible. (Checks are payable to the Trustees of Phillips Academy.) **Application will not be considered unless the Preliminary Application Card and Fee are received.**

Complete the Personal Interview Requirement.

Candidates must complete the required interview by February 1. Candidates are urged to schedule interviews in either the spring, summer, or early fall of the year before they intend to matriculate. It is in everyone's best interests for the interview to take place as early as possible. A visit to the Academy is desirable as it gives candidates a chance to have questions answered and to see the school. Please allow two hours for the tour and interview and be sure to dress with the weather in mind. **Candidates who cannot visit the Academy are themselves responsible for arranging an interview with an Alumni Admission Representative.** (See page 55.)

Return the Final Application Forms.

Final application forms, mailed in mid-November to candidates who have filed preliminary applications, should be completed and returned as soon as final or mid-semester grades are available for the fall term. **The transcript must include current grades for application to be complete.** Priority consideration is given to applications completed by the advertised deadline of February 1. ("Late applicants" should return forms immediately.) Teacher recommendations should be from *current* teachers.

Take the Secondary School Admission Test.

(12th Grade or Postgraduate candidates are not required to take the SSAT.

Secondary School Admission Test

The Bulletin of Information for Candidates, published by the Educational Testing Service, Princeton, NJ 08540, will be sent by Andover to all 1987-88 candidates who have filed a Preliminary Application. This Bulletin describes the Secondary School Admission Test, which will be given on the following dates:

December 12, 1987	March 5, 1988
January 16, 1988*	April 18, 1988*
June 18, 1988	

*International administration

Candidates are strongly urged to take the SSAT administered in December, 1987. (The December tests will not be given in foreign countries.) Otherwise, the candidates should take the January, 1987 administration.

Early Decision

Andover does not participate in any early decision plan for admissions.

Twelfth Grade or Postgraduate Candidates

Instead of the Secondary School Admission Test, Senior and Postgraduate candidates must take either the Preliminary Scholastic Aptitude Test (P.S.A.T.) or the Scholastic Aptitude Test (S.A.T.) of the College Board Scholastic Aptitude Tests (C.E.E.B., Box 592, Princeton, NJ 08540).

Postgraduates are full-fledged members of the Senior Class and are eligible for all school activities. Because of their academic credits, they frequently have maximum flexibility in course selection.

School Costs and Financial Aid

Tuition and Fees, 1987–1988

The tuition charge for 1987–1988 is \$11,200 for boarding students and \$8,550 for day students.

The average annual cost to educate a student at Andover is approximately \$15,000. The difference between the annual cost and the tuition charge is made up from gifts and income from endowment, which itself is the product of the generosity of alumni, parents and friends.

Day Students

Day students must live in Andover, North Andover, North Reading, Methuen or Lawrence.

Phillips Academy admits students of any sex, race, color, national and ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the school. It does not discriminate on the basis of sex, race, color, national and ethnic origin in administration of its educational policies, admission policies, scholarship and loan programs, and athletic and other school-administered programs.

To reserve a student's place for a given school year, a deposit in the amount of \$300 must be received by May 1 in the case of a returning student, or by the acceptance deadline in the case of a new admission. It is non-refundable under any circumstances.

The tuition less the above deposit is billed in two equal amounts, with the fall payment due August 1, and the final payment due December 1. The award of scholarship aid or loan reduces the billed amount accordingly.

An alternative is the use of the Insured Tuition Payment Plan, arranged with a private agency. Information about this alternative and an application form are sent to the parents before the first bill is due.

No refund will be made of the fall tuition for any student who withdraws, is dismissed, or is absent for any reason after registration in the fall. No refund will be made against the final payment for any student who withdraws, is dismissed, or is absent for any reason after returning to school at the beginning of the winter trimester.

An optional Tuition Refund Plan is offered, at 3% of tuition, to protect against the departure of a student for any reason. Under this plan 75% of the unused portion of the tuition for school days remaining is refunded.

Tuition covers instruction, board, room (including basic furniture), physical training and most athletic privileges, use of laboratory equipment and material, admission to all authorized athletic contests and most authorized entertainments at George Washington Hall or elsewhere on campus, including the Saturday evening movies.

The school charges do not include tutoring, language training, special instruction in music or certain athletics, materials fees for art courses, medical expenses, laundry, textbooks, dues to school organizations or breakage and damage to school property. The school charges do not include cost of participation in the Washington Intern Program, School Year Abroad, or other off-campus programs. The school provides sports

uniforms and most athletic equipment. Students are required to bring their own footwear and urged to bring along whatever other personal athletic equipment they already possess. Bills for items not included in the school charges may be rendered at any time during the school year.

All charges must be paid by their due date in order to assure a student's place at the Academy. Students with past-due bills may be asked to leave any time. The diploma of the Academy will not be awarded to Seniors whose school accounts are not paid in full by June 1.

Other Expenses

The following expenses will generally be similar to those a student would experience if he or she were at home: athletic equipment; laundry and cleaning; dues and publications and spending money.

Travel expense will vary according to home location. Books and supplies depend on course selection, and are approximately \$600.

Financial Aid

Financial need should never discourage a student from applying for admission to Phillips Academy. Andover selects students for admission on the basis of qualifications, not financial circumstances.

Andover offers full Scholarship Grants for low-income families; Scholarship Grants and low-interest, deferred-payment Student Loans for a broad spectrum of need, and Parent Loans for upper-middle income parents.

Scholarship Grants: \$3,550,000 in 1987-88

Average grant: \$7,000

Student Loans: \$250,000 in 1987-88

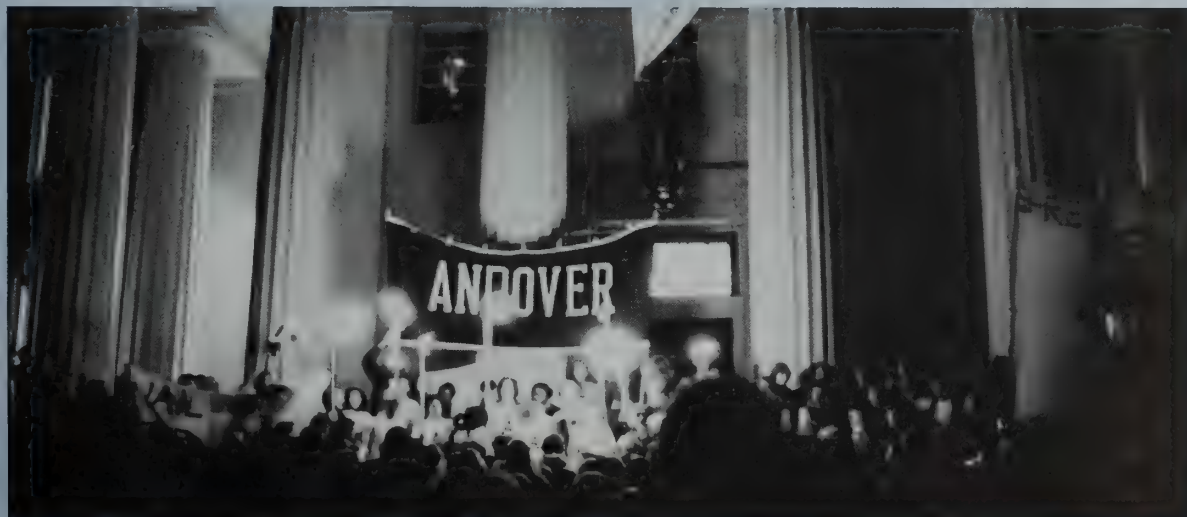
(presently at 6% interest)

A moderate-interest Parent Loan Program is available to upper-middle income parents who do not qualify for Scholarship Grants or Student Loans, to help them spread educational costs more evenly over the school and college years.

Parent Loans: \$275,000 available in 1987-88

(presently at 8.5% interest)

If you are not sure whether you qualify for financial aid of some kind, we encourage you to apply; this is the best way to find out.



Because Andover values and seeks an economically diverse student body, aid is awarded only on a basis of demonstrated need. In 1987, no qualified student was denied admission for financial reasons.

Need depends on many variables, such as family income, number of children, age of parents, other tuitions, unusual medical expenses, taxes, assets, liabilities, etc.

To apply for financial aid:

1. When you make out the Preliminary Application be sure to check "yes" for financial aid.
2. Andover will send you the Parents' Financial Statement (PFS). Fill it out and send the original to the School Scholarship Service (SSS) in Princeton, NJ. The SSS uses a formula nationally accepted among independent schools to analyze need, and provides Andover with a preliminary estimate of your family's ability to contribute to educational expenses. The process assures that all schools to which a student applies will base their calculations on the same data.
3. Send a copy of the PFS to Andover prior to January 15, along with the most recent IRS 1040 form, or other income tax form used.

Request for aid filed after the January 15 deadline may not be processed in time to be included in the initial allotment of scholarship funds. Requests filed after January 15 must await subsequent availability of scholarship monies.

In case of divorced or separated parents:

The resources of both natural parents must be considered in cases where a divorce or separation has taken place. This information should be provided on the financial statement provided by the school. The availability of complete information from both parents is essential to assure a fair assessment of the family contribution. Lack of this information may result in no award of aid or an arbitrarily low financial aid package.

Financial aid award letters are mailed in the same envelope as the Certificate of Admission, on March 10.

Parent Loan Plan:

A Parent Loan Plan is available, at a modest rate of interest, to families in the \$50,000 to \$90,000

income range, as their needs require, with preference given to students entering 9th and 10th grades. Repayment of these loans begins immediately, but repayment of the principal is deferred during the students' college years and then continues for two additional years.

For more detailed information, direct your letter or telephone call to the Director of Financial Aid, Phillips Academy, Andover, MA 01810. Telephone: 617-475-3400 (ext. 596).

Alumni Admission Representatives

While it is advisable from the student's point of view to visit the school, distance frequently renders a visit impractical. When this is the case, the candidate should write or telephone for an interview with the most conveniently located Alumni Admission Representative. (Please see list on page 55.) When you arrange for an interview with an Alumni Admission Representative, please notify the Andover Admission Office of the date of the interview and the name of the interviewer. This procedure will help us keep your records up-to-date. A candidate unable to arrange for an Alumni Admission Representative Interview should communicate with the Admission Office for assistance.

ALABAMA

Birmingham

A. Henry Gaede, Jr. '57
Bradley, Arant, Rose & White
1400 Park Place Tower 35203
(205) 252-4500

Fairhope

Peter H. Williams '70
Hand, Arendall, Bedsole, et al.
P.O. Box 941 36533
(205) 432-5511

ALASKA

Anchorage

John K. Brubaker '55
2110 Otter Street 99504
(907) 279-3581

Fairbanks

K. Andre McMullen '66
741 Chena Hills Drive 99709
(907) 479-2964

ARIZONA

Phoenix

William C. Torrey '49
4250 East Camelback Road
Suite 115K 85018
(602) 955-0744

Scottsdale

Geraldine Treadway Miller '47
4721 N. 70th Street 85251
(602) 371-6415

Tucson

John S. Greenway '42
2200 E. Elm Street 85719
(602) 325-1541
Richard L. Morse '53
5402 East Holmes 85711
(602) 621-4828
Donald B. Rollings '70
363 S. Meyer 85701
(602) 623-4091

ARKANSAS

Forrest City

Henry Loeb III '39
125 Hill Street 72335
(501) 633-1410

Harrison

James E. Liles '55
1206 Eugene Street 72601
(501) 741-8538



Little Rock

Mose Smith III, M.D. '48
5326 West Markham Street
Suite 14 72205
(501) 664-1527

CALIFORNIA

Berkeley

Peter J. Stern '81
1833 Harman Street 94703
(415) 653-6884

Beverly Hills

Thompson K. Vodrey '52
1529 Gilcrest Drive 90210
(213) 275-5529

Burlingame

Maxwell Steinhardt '73
1436 Balboa Avenue 94010
(415) 342-1293

Corona Del Mar

John E. Kidde '64
3907 Inlet Isle Drive 92625
(714) 640-7075

Fresno

Geoffrey M. Brittin, M.D. '52
St. Agnes Hospital
1303 E. Herndon Avenue 93710
(209) 449-3120

Huntington Beach

James B. Blackmon '57
McDonnell Douglas Astronautics
5301 Bolsa Avenue 92647
(714) 786-8500

Long Beach

Alan Fox '60
Petrolane, Inc.
P.O. Box 1410 90806
(213) 427-5471

Los Angeles

David A. Cathcart '57
Gibson, Dunn & Crutcher
333 S. Grand Avenue 90071
(213) 229-7308

George W. Davis III, M.D. '52
4616 Keniston Avenue 90043
(213) 294-1226

Russell K. Decker '56
Decker Management Systems
Ste. 325
515 S. Flower Street 90071
(213) 489-2170

Walter L. Farley, Jr. '28
12300 1st Helena Drive 90049
(213) 476-1028

Elizabeth Gorsuch Figus '42
818 N. Doheny Drive #703 90069
(213) 550-1971

Trevor A. Grimm '56
Kaplanis & Grimm
551 S. Oxford Avenue 90020
(213) 380-0303

Jeffrey Hiroto '77
1133 Hicks Avenue 90063
(213) 264-3498

Joon Y. Kim '80
1246 Armacost Avenue, #5 90025
(213) 473-1739

F. Jack Liebau '81
Capital Research Company
333 South Hope Street 90071
(213) 486-9215

Tim McChristian '73
4225 Via Arbolada #532 90042
(213) 222-2132

Menlo Park

Carey Orr Cook '61
1065 Trinity Drive 94025
(415) 321-0708

Peter W. Lee '60
1100 Trinity Drive 94025
(415) 823-5788

William M-S. Lee '51
271 West Floresta Way 94025
(415) 854-4918

Miranda

Craig B. Reynolds '73
P.O. Box 470 95553
(707) 943-3089

Monterey Park

Thomas J. Keefe, Jr. '50
Ameron, Inc.
P.O. Box 3000 91754
(713) 966-2523

Northridge

Johnson Lightfoote '69
10914 Crebs Avenue 91326
(818) 783-3492

Oakland

Patrick A. Cathcart '64
5844 Margarido Drive 94618
(415) 654-5382
Patrick J. O'Hern '65
Lawrence Livermore
21 Bowles Place 94610
(415) 422-4874
Thomas E. Pollock III '61
6039 Bullard Drive 94611
(415) 398-3825

Pacific Beach

Anne W. Rollings '75
P.O. Box 90878 92109
(619) 483-4206

Palo Alto

Donald A. Way '63
320 Kellogg Avenue 94301
(415) 324-0606

Pasadena

Robert J. Cathcart '64
677 LaLoma Road 91105
(213) 622-5555
Graeme Henderson '52
1613 Vista Lane 91103
(818) 449-6152
Judy Mustille '66
1146 Wellington Avenue 91103
(818) 793-4964
Christopher L. Rafferty '66
Union Venture Corporation
225 South Lake Avenue 91101
(818) 304-1982

Riverside

Peter C. Parsons '55
Riverside County Publishing Co.
P.O. Box 8368 92515
(714) 689-1122

San Anselmo

H. Leonard Richardson '45
5 Oakhill Drive 94960
(415) 453-4934

San Diego

Norman R. Allenby '51
Hillyer & Irwin, Ste. 1400
530 B Street 92101-4479
(619) 234-6121

San Francisco

Hobart M. Birmingham, Jr. '62
Bank of America
555 California Street
34th Floor 94104
(415) 391-4500
Samuel R. Miller '66
Morrison & Foerster
345 California Street 94104
(415) 434-7230
Martin Quinn '60
311 California Street
10th Floor 94104
(415) 956-2828
William D. Sherman '60
Morrison & Foerster
345 California Street 94104
(415) 434-7432
William W. Sterling '57
Heller, Ehrman, et al. Ste. 3000
44 Montgomery Street 94104
(415) 772-6084

San Rafael

William S. Creighton '39
32 Woodoaks Drive 94903
(415) 492-0637

Santa Ana

Reginald D. Barnes, Jr. '58
Crysen Services, Inc.
825 Parkcenter Drive 92705
(714) 835-6505

Santa Barbara

W. Wright Watling '68
Beaver Free Corporation, Ste. 100
200 E. Carrillo Street 93101
(805) 963-1631

Sunnyvale

Wayne L. Earl '57
Woodside Electronics Corporation
479 Macara Avenue 94086
(408) 773-9771

Torrance

Samuel R. Suitt '57
1745 Maple Avenue #73 90503
(213) 320-7864

Whittier

Carlos F. Sanchez '75
14515 Imperial Highway 90604
(213) 613-6978

COLORADO

Aspen

John P. McBride '56
105 Pacific Avenue 81611
(303) 925-2102

Colorado Springs

Josephine Hartwell Boddington '41
1433 Alamo Avenue 80907
(303) 634-5679

Denver

Anthony T. Accetta, '61
1600 Stout Street
Suite 1700 80202
(303) 595-0333
William W. Grant '49
545 Race Street 80206
(303) 321-1566
John F. Malo '40
#7 Polo Field Lane 80209
(303) 893-2175
David C. Wilhelm '38
650 S. Cherry Street
Ste. 1245 80222
(303) 321-1200

Englewood

Marguerite Kent Timbel '75
6470 East Long Circle North 80112
(303) 830-4461

Glenwood Springs

The Rev. George Pierce '49
St. Barnabas Episcopal Church
546 Hyland Park Drive 81601
(303) 945-6423

Littleton

William R. Rapson '63
33 Fairway Lane 80123
(303) 830-8000

CONNECTICUT

Darien

George H. Webb, Jr. '50
7 Sherry Lane 06820
(203) 655-2333
David E. Winebrenner '58
27 Briar Brae Road 06820
(203) 323-1874

Greenwich

Gerard E. Jones '55
One Deer Lane 06830
(203) 869-1441

Ridgefield

Peter G. Pappas '63
50 Blackman Road 06877
(203) 431-8148

Weston

Stuart Sawabini '73
3 Forest Street 06883
(203) 454-1624

Westport

Robert B. Simonton '50
25 Woody Lane 06880
(203) 227-4060

DELAWARE

Wilmington

Ellen Huntington Bryant '65
2303 West Eleventh Street 19805

Mary Lou Miller Hart
18 Briar Road, Briarwood 19803
(302) 764-0361

DISTRICT OF COLUMBIA

Washington

Douglas O. Adler '70
Bowman, Conner, Touhey
Suite 203
2828 Pennsylvania Ave., N.W. 20007
(202) 965-7600

Daniel W. Aibel
1209 12th Street, N.W. 20005
(202) 289-8081

John O. Barres '78
Theological Coll., Catholic Univ.
401 Michigan Avenue, N.E. 20017

George Beatty '50
Lee, Twomey & Kent
1200 18th Street, N.W. 20036
(202) 457-7628

Stephen B. Clarkson '55
Pierson, Ball & Dowd
1200 18th Street, N.W. 20036
(202) 331-8566

James L. Clunan '56
3927 Military Road, N.W. 20015
(202) 647-9333

Andrew P. Ireland '48
House of Representatives
2416 Rayburn House Office
Bldg. 20515
(202) 225-5015

Franklin L. Lavin '75
618 E. Street, N.E. 20002-5230
(202) 544-7775

John Reynolds '65
3427 Quebec St., N.W. 20016
(202) 347-4813

FLORIDA

Clearwater

Daniel H. Jenkins '62
600 Cleveland Street Ste. 700
33515
(813) 446-7171

Gainesville

Richard M. Cohen '61
4313 Northwest 32nd Street 32605
(904) 373-8929

Jacksonville

Arthur W. Milam '45
Mahoney, Hadlow, Adams, et al
P.O. Box 4099 32201
(904) 354-1100

Robert B. VanCleve, M.D. '50
Riverside Clinic
2005 Riverside Avenue 32204
(904) 387-7689

Miami

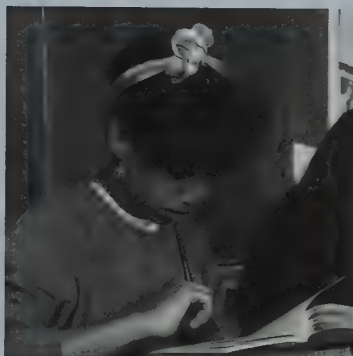
Carlos de la Cruz '59
3201 N.W. 72nd Avenue 33122
(305) 594-0684

Marion Badoian Emmanuel '54
6971 S.W. 134th Street 33156
(305) 253-6363

Christopher M. Harte '65
Three Grove Isle Drive #1604 33133
(305) 858-8792

Roberto Martinez, Esq. '71
U.S. Attorney's Office, Ste. 700
155 S. Main Avenue 33130
(305) 350-4471

David J. Williams II '38
7621 S.W. 56th Avenue
Apt. A 33143
(305) 448-5600



Naples

Bernard L. Boyle '27
480 Seventh Avenue, North 33940
(813) 261-8848

Robert W. Hattemer '49
440 Spinnaker Drive 33940
(813) 263-3300

Kenneth D. Krier '68
4840 Whispering Pine Way 33940
(813) 263-7197

Sarasota

S. Preston Clement, Jr., M.D. '47
1500 S. Lodge Drive 33579
(813) 366-3466

Michael T. Madison '65
Marie Selby Botanical Gardens
800 S. Palm Avenue 33577
(813) 366-5730

Tampa

Ronald J. Floto '61
2116 Magdalene Manor Drive 33613
(813) 968-4828

David A. Kennedy '60
Shimbery, Kennedy, Frost, Inc.
1000 N. Ashley Dr., Ste. 400 33602
(813) 228-9884

Winter Haven

Richard C. Cheney '48
Barnett, Banks Trust
P.O. Box 820 33880
(813) 294-7711

GEORGIA

Atlanta

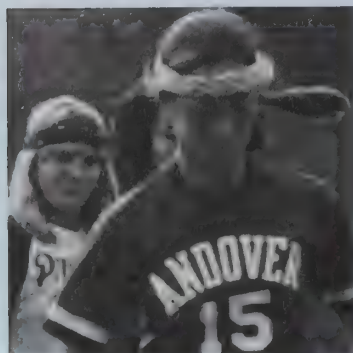
Herbert R. Elsas '28
Sutherland, Asbillo-Brennan
3100 First National Bank
Tower 30303
(404) 658-8709

Louis J. Elsas II M.D. '54
Emory University
Medical Genetics
2040 Ridgewood Drive 30322
(404) 727-5840

Peter C. Mohr '54
44 Waterford Court 30328
(404) 395-6273

Timothy S. Perry '65
Alston and Bird
35 Broad Street 30335
(404) 586-1642

Herbert L. Young '53
Mohasco
1755 The Exchange 30339
(404) 951-6225



Columbus

William S. Cain, Jr. '40
P.O. Box 2125 31902
(404) 563-3288

Dalton

Denny Donegan '52
C & S National Bank
300 South Thornton Avenue 30720
(404) 226-3000

Savannah

William C. Rhangos, M.D. '49
5354 Reynolds Street
Ste. 333 31405
(912) 355-3776
Roger S. Seymour '44
2 Heathmear Way 31411
(912) 598-0197

Stone Mountain

Paul M. Nelson '68
978 Millard Road 30088
(404) 469-5466

HAWAII

Honolulu

Francis T. O'Brien '61
550 Halekauwila Ste. 105
96813
(808) 526-2646
Thomas L. Stirling '59
Stirling & Kleintop
900 Fort Street #1650 96813
(808) 524-5183

ILLINOIS

Chicago

Warren Baker '66
Winston & Strawn
Ste. 5000
One First National Plaza 60603
(312) 558-5815

Joseph S. Beale '55
Hawthorne Realty Group
8 East Huron 60611
(312) 266-8100

Steven Blutter '72
2105 W. Giddings Street 60625
(312) 975-7595

Rodney Goldstein '70
Frontenac Company, Ste. 1900
208 S. LaSalle Street 60604
(312) 368-0044

King W.W. Harris '61
209 E. Lake Shore Drive 60611
(312) 664-2666

Lawrence G. Kemp '75
5539 S. Hyde Park Blvd.
Apt. 1 60637
(312) 752-0707

Nathan A. Lee '74
3017 N. Kenmore 60657
(312) 975-6648

Evanston

Wayne E. Robinson, Jr. '78
1404 Judson Avenue 60201
(312) 328-8256

Kenilworth

Rita DeRosa Kallman '52
535 Brier Street 60043
(312) 251-5578

Peoria Heights

Robert T. Stevenson, Jr. '53
Commercial National Bank
301 S.W. Adams Street 61631
(309) 655-5325

Quincy

Sandra Jayne Castle Hull '58
2160 Maine Street 62301
(217) 224-3700

Springfield

Jon and Ida Rock Noll '66
Noll Law Office
Illinois Financial Center
500 West Monroe 62704
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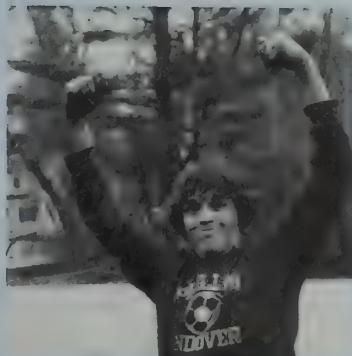
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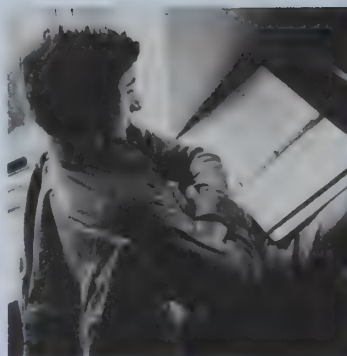
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Victoria Hull '78
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John A. Mayer, Jr. '58
Morgan Guaranty Ltd.
30 Throgmorton Street EC2N 2NT
(01) 600-7545
Diane Sorota O'Dwyer '55
43 The Pryors
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FRANCE

Paris

Patrick Nollet '51
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75680
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ITALY

Ivrea

David Olivetti '60
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0125-40270

JAPAN

Hyogo-ken

Kiyoshi Kondo '64
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0727-77-5154

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S. Steven Yamamoto '51
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Department of Physics
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KOREA

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734-0146

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Baker & McKenzie
21 Collyer Quay #16-00
Hong Kong Bank Building 0104
224-8066
Arthur Winter '73
Sidley & Austin
ULC Building, Ste. 2008
5 Shenton Way 0106
65 224-5000



MEXICO

Mexico, D.F.

John F. Lynch '70
Bosque de Ciruelos 162
Bosques de las Lomas 117008
(905) 596-7442

MOROCCO

Tangier

Joseph A. McPhillips III '54
The American School of Tangier
Rue Christophe-Columb
415 27 or 415 28

PUERTO RICO

Guaynabo

Ricardo Gonzales '53
A13 Argentine Street,
Gardenville 00657

Hato Rey

Jorge R. Gonzalez Vizcarrondo '62
The Royal Bank Center, 10th Fl
255 Ponce de Leon Avenue 00918
(809) 759-9242

Ponce

Arturo E. Valldejuly '57
El Monte A-104 00731
(809) 758-0260

Santurce

Samuel C. Dysart '46
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SWITZERLAND

Geneva

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% CISA 13
Avenue deBude 1202
(022) 345550

Prattin

John R. Thompson '41
Firestone Schweiz

Zurich

Heimeran Von Stauffenberg '54
Im Braechli 56 8053
550941

TAIWAN

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THAILAND

Bangkok

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VENEZUELA

Caracas

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Centro Comercial Pasel Las Merc.
Pisa 3 Ruta 53, Las Mercedes
921122

VIRGIN ISLANDS

St. Thomas

Robert E. Noble '43
Thousand Islands Corporation
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P.O. Box 5170 008
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WEST GERMANY

Bochum

Edwin A. Hopkins '56
Mercatorstr. 11 D4630
0234-700-5042

Hamburg

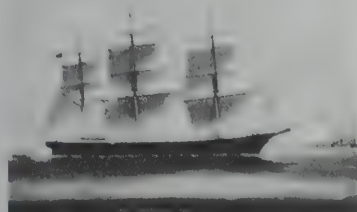
Friedrich K. Goerner '40
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(040) 45 25 20

West Berlin

Julian Herrey '56
AMK Berlin
Messedam 22 1000
W. Berlin 19
(030) 30383811



STATISTICAL INFORMATION for 1986-1987



In 1864 Shimeta Neesima left Japan as a stowaway on the clipper ship *Wild Rover* for America and sold his samurai sword for a Chinese New Testament. He was adopted by the shipowner, an Andover trustee, was christened Joseph Hardy Neesima, graduated from Andover in 1867, later from Amherst and the Andover Theological Seminary, and became the first Japanese to be ordained a Congregationalist minister. Neesima returned to Japan to found The Doshisha, a great university in Kyoto dedicated to Japanese and Christian ideals. Doshisha recently celebrated its 100th birthday.

Geographical Distribution*

Alabama	5	Australia	1
Alaska	2	Bahamas	1
Arizona	4	Botswana	1
Arkansas	1	Brazil	2
California	70	Cameroon	1
Colorado	4	Canada	8
Connecticut	71	China, People's Republic of	4
Delaware	4	Comoro	1
District of Columbia	15	Equador	1
Florida	19	Finland	1
Georgia	3	France	11
Hawaii	3	Germany	3
Idaho	0	Great Britain	3
Illinois	23	Haiti	1
Indiana	7	Hong Kong	3
Iowa	8	India	1
Kansas	0	Indonesia	1
Kentucky	5	Italy	2
Louisiana	2	Ivory Coast	1
Maine	20	Japan	2
Maryland	28	Jordan	1
Massachusetts	442	Korea, Republic of	2
Michigan	12	Liberia	1
Minnesota	6	Mexico	2
Mississippi	5	Philippines	1
Missouri	3	Saudi Arabia	2
Montana	3	Singapore	1
Nebraska	2	Somalia	1
Nevada	1	South Africa	1
New Hampshire	41	Spain	5
New Jersey	37	Sudan	1
New Mexico	0	Syria	1
New York	156	Thailand	1
North Carolina	20	Total Foreign	69
North Dakota	1	SCHOOL TOTAL	1212
Ohio	15		
Oklahoma	4		
Oregon	1		
Pacific Islands	0		
Pennsylvania	26		
Rhode Island	13		
South Carolina	6		
South Dakota	0		
Tennessee	8		
Texas	16		
U.S.V.I. & P.R.	0		
Utah	0		
Vermont	10		
Virginia	12		
Washington	2		
West Virginia	3		
Wisconsin	2		
Wyoming	2		
Total U.S.	1143		

*Based on place of current
RESIDENCE, not citizenship.

	<u>Girls</u>	<u>Boys</u>	<u>Total</u>
Seniors	169	218	387
Uppers	153	187	340
Loweres	146	169	315
Juniors	90	82	172
	558	656	1214

Total Boarding Students	960
Total Day Students	254
TOTAL	1214

College Matriculations for the Class of 1986

The Class of 1986 applied to 173
different colleges and matriculated at
101 colleges and universities.

COLLEGE	AD- MITTED	MATRIC- ULATED	COLLEGE	AD- MITTED	MATRIC- ULATED	COLLEGE	AD- MITTED	MATRIC- ULATED
American/Paris	2	2	Kenyon	5	1	Tulane	9	2
Amherst	7	2	Lake Forest	2	1	Union	5	1
Babson	3	1	Lehigh	9	4	Vanderbilt	6	2
Barnard	18	3	Lewis & Clark	4	1	Vassar	17	2
Bates	4	1	Macalester	8	4	U Vermont	21	8
Boston College	6	1	U Maine	2	1	Villanova	2	2
Boston University	22	2	U Mass./Amherst	23	4	U Virginia	10	2
Bowdoin	9	3	McGill	6	5	Washington College	2	2
Brandeis	8	1	U Miami	2	1	Washington U	6	2
Brown	44	20	U Michigan	44	6	U Washington	1	1
Bryn Mawr	3	1	Middlebury	28	16	Wellesley	4	4
U Cal/Berkeley	24	6	M.I.T.	4	2	Wesleyan	33	15
U Cal/LA	4	2	Newcomb/Tulane	5	1	Williams	7	5
U Cal/San Diego	2	1	New School Soc. Res.	2	1	University of Wisconsin	9	1
Carleton	10	3	New York University	11	5	Wittenberg	1	1
Carnegie-Mellon	9	4	U North Carolina	3	1	College of Wooster	3	1
U Chicago	9	3	Northwestern	24	2	Yale	28	19
Claremont McKen.	3	1	Oberlin	15	2			
Colby	9	1	Occidental	3	2			
Colgate	8	4	U Pennsylvania	39	11			
Colorado College	8	2	Pomona	9	1			
U Colorado	15	3	Princeton	22	13			
Columbia	28	10	Queens U/Canada	1	1			
Columbia Eng.	2	1	Reed	1	1			
Connecticut College	16	7	U Richmond	2	1			
Cornell	29	10	RISD	3	2			
Dartmouth	25	12	Rollins	4	2			
Denison	6	2	Rutgers	3	1			
Dickinson	3	2	U San Francisco	1	1			
Drake	1	1	Skidmore	12	4			
Duke	12	2	Smith	5	1			
Emory	10	4	U.S.C.	4	1			
U Florida	2	1	S.M.U.	2	1			
Franklin College, Switz.	1	1	Spelman College	1	1			
Franklin & Marshall	6	1	St. Andrews, Scotland	1	1			
Georgetown	32	12	Stanford	13	8			
Hamilton	12	2	Swarthmore	4	1			
Hampshire College	3	1	U Texas	5	3			
Harvard	33	20	U Toronto	2	1			
Hobart	5	1	Trinity College	15	7			
Johns Hopkins	19	4	Trinity U/Texas	1	1			
U Kansas	1	1	Tufts	13	3			

College Admissions

Admission to colleges is not based on a student's mere presence at Andover, but is based on how well the student has used this experience. All selective colleges exercise judgments relative to factors over and above academic ability in selecting a freshman class. While some of these factors relate to exceptional talents in one area or another, others are related to diversity in background and educational objectives.

The college admissions picture is entirely different and infinitely more complex now than it

was in past decades. Competition for admission to selective colleges is rigorous, and Andover students are encouraged to apply across a range of choices to colleges with varying degrees of selectivity. The one constant in all of this should be a real desire to educate oneself. To this end the College Counseling Office works with the class as a whole and with each candidate to help each one draw up a list of colleges that makes sense.

Phillips Academy seniors go to college well prepared for the academic program and social experience that lie ahead.





TRUSTEES

MELVILLE CHAPIN '36

A.B., J.D.

President

elected 1974

elected President, 1981

Cambridge, Massachusetts

DONALD W. McNEMAR

B.A., M.A., Ph.D.

Clerk

elected 1981

Andover, Massachusetts

CHARLES APPLETON MEYER '35

A.B.

Treasurer

elected 1969

elected Treasurer 1976

Lake Forest, Illinois

FREDERICK W. BEINECKE II '62

B.A., J.D.

elected 1980

New York, New York

WILLIAM WADE BOESCHENSTEIN '44

S.B.

elected 1971

Perrysburg, Ohio

STEPHEN BRADNER BURBANK '64

A.B., J.D.

elected 1980

Philadelphia, Pennsylvania

RICHARD LEE GELB '41

A.B., M.B.A.

elected 1976

New York, New York

ROBERT LIVINGSTON IRELAND III '38

A.B., LL.B.

elected 1960

New York, New York

CAROL HARDIN KIMBALL '53

A.B.

elected 1974

New York, New York

ELIZABETH PARKER POWELL '56

B.A., M.A., M.B.A.

elected 1980

Wellesley Hills, Massachusetts

ALEXANDER B. TROWBRIDGE '47

B.A.

elected 1985

Washington, D.C.

DAVID M. UNDERWOOD '54

B.A.

elected 1983

Houston, Texas

THOMAS H. WYMAN '47

B.A.

elected 1980

New York, New York

Alumni Trustees

CYNTHIA EATON BING '61

B.A.

President of Alumni Council

elected 1984 for 2 years

New York, New York

CLINTON J. KENDRICK '61

B.A., M.B.A.

Ex Officio as Chairman

of the Alumni Fund to 1986

London, England

RICHARD D. LOMBARD '49

B.A., M.B.A.

elected 1982 for 4 years

New York, New York

SYBIL P. SMITH A'61

B.A.

elected 1984 for 4 years

Wellesley, Massachusetts

FRANCES YOUNG TANG '57

B.S.

elected 1982 for 4 years

New York, New York

MORRIS E. ZUKERMAN '62

A.B., M.A., M.B.A.

elected 1984 for 4 years

Pacific Palisades, California

Trustees Emeriti

PHILIP KIRKHAM ALLEN '29

A.B.

1969–1980

Andover, Massachusetts

GEORGE BUSH '42

A.B.

1967–1980

Washington, D.C.

JOHN LEWIS COOPER '31

A.B.

1968–1981

Dover, Massachusetts

CHARLES STAFFORD GAGE '21

A.B., A.M.

1952–1976 (Treasurer 1966–1976)

New Haven, Connecticut

JOHN USHER MONRO '30

A.B.

1958–1983

Jackson, Mississippi

GERARD PIEL '33

A.B., D.Sc., Litt. D., L.H.D., LL.D.

1969–1985

New York, New York

HEADMASTER'S OFFICE

DONALD WILLIAM McNEMAR

Headmaster

B.A., M.A., Ph.D.

PETER QUACKENBUSH McKEE

Associate Headmaster

A.B., Ed.M.

JANE H. MUNROE

Executive Secretary to the Headmaster

OFFICE OF THE DEAN OF FACULTY

K. KELLY WISE

Dean of Faculty

A.B., M.A.

WILLIAM FRANKLIN GRAHAM

Clerk of the Faculty

S.B.

OFFICE OF THE DEAN OF STUDIES

JEANNE E. AMSTER

Dean of Studies

A.B., A.M.

HERBERT HARRY MORTON III

Registrar

A.B.

DAVID A. PENNER

Scheduling Officer

A.B., M.A.

JOAN F. SCHLOTT

Recorder

B.S.

DEANS OF THE RESIDENTIAL CLUSTERS

JONATHAN STABLEFORD

Dean of Residence

B.A., M.A.T.

CARL EDWARD KRUMPE, JR.

Abbot Cluster

A.B., A.M.

PAMELA BROWN

Pine Knoll Cluster

ScB., M.A.L.S.

HELMUTH P. JOEL

Rabbit Pond Cluster

A.A.

JOHN A. GOULD

West Quadrangle South Cluster

A.B., M.A.

VICTOR W. HENNINGSSEN III

Flagstaff Cluster

B.A., A.M., Ed.M.

HENRY B. WILMER, JR.

West Quadrangle North Cluster

B.A., M.A.

CARROLL WESLEY BAILEY

Director of Residential Affairs

A.B., J.D.

PRISCILLA K. BONNEY-SMITH

Associate Dean

B.A., M.A.T.

BUSINESS OFFICE

GEORGE A. NEILSON, JR.

Business Manager

B.S., M.Ed.

SUSAN GARTH STOTT

Assistant Business Manager

B.A., M.C.R.P.

DONALD HENRY BADE

Comptroller

B.B.A.

OFFICE OF ADMISSION AND FINANCIAL AID

JEANNIE FORD DISSETTE

Dean of Admission

A.B., M.A.

MEREDITH PRICE

Associate Dean of Admission

A.B., M.A.T.

TIMOTHY D. DEMPSEY

Director of Financial Aid

B.A.

JEAN C. McKEE

Admission Coordinator

A.B.

ROBERT P. HULBURD

Admission Officer

A.B., M.A.

REBECCA CARR

Admission Officer

B.A.

PETER L. DRENCH

Admission Officer

B.A., M.A.

ROBERT A. EDWARDS

Admission Officer

B.A.



FACULTY 1985-86

The date following the name indicates the year the instructor joined the Andover faculty. This reflects the faculty for the 1985-86 school year.

J. ELAINE ADAMS (1982)
Instructor in Physics and Astronomy
B.S. Gordon; Ph.D. Northeastern

JEANNE E. AMSTER (1979)
Dean of Studies; Instructor in History and the Social Sciences
A.B. Mt. Holyoke; M.A. Stanford

CHARLES EMORY APGAR III (1969)
Instructor in Physics
A.B. Earlham; M.A.T. Brown

VINCENT B.J. AVERY (1976)
Chairman Department of Philosophy and Religious Studies; Instructor in Religion and Philosophy
S.T.L. Gregorian; S.T.D. Academic Alphon-siana, Rome

DONALD H. BADE (1975)
Comptroller
B.B.A. University of Wisconsin

CARROLL WESLEY BAILEY (1970)
Director of Residential Affairs; Instructor in English
A.B., J.D. University of Pittsburgh

PETER JOSEPH BALEYKO (1970)
Assistant to the Comptroller
S.B. Boston College

LESLIE BALLARD (1973)
Chairman Department of Chemistry; Instructor in Chemistry and Biology
B.A. Sarah Lawrence, M.A.T. Harvard

SETH B. BARDO (1981)
Instructor in English
B.A. Yale; M.A.T. Harvard

DONALD THOMPSON BARRY (1980)
Instructor in Mathematics
B.A. Carleton; M.Div. Yale

YOLANDE BAYARD (1973)
Instructor in French
B.S., M.A. Central Connecticut State College

AUDREY NYE BENSLEY (AA 1965)
Instructor in Art

GORDON GILMORE BENSLEY (1949)
Instructor in Art on the Ammi Wright Lancashire Foundation
A.B. Yale

LOUIS M. BERNIERI (1977)
Instructor in English
A.B. Harvard; M.A. Middlebury

GEORGE WILLIAM BEST (1958)
Instructor in Mathematics on the John Mason Kemper Foundation
B.S. Union College; A.B. Boston University

KATHRYN A. BIRECKI (1984)
Athletic Trainer
B.S. Central Connecticut State University

JENNIFER BOND (1985)
Instructor in Physics and Astronomy
B.A. Wellesley

PRISCILLA KEENE BONNEY-SMITH (1974)
Associate Dean
A.B. Bates; M.A.T. Brown

JOANNE Y. BORLAND (1984)
School Physician
A.B. Bryn Mawr; M.D. Harvard

NANCY W. BOUTILIER (1984)
Instructor in English
A.B. Harvard

MIMI DENTON BRAVAR (1980)
Instructor in Music
B.S. Juilliard, M.M. Boston University

CAROLE BRAVERMAN (1979)
Instructor in English
B.A. Brooklyn College; M.A. Purdue

CAROLYN B. BRECHER (1974)
Instructor in Modern Dance; Assistant in Audio-Visual
A.B. Bard

NANCY B. BROTHER (1981)
Academic Counselor
B.S. University of Nebraska; Ed.M. University of Lowell

PAMELA BROWN (1980)
Academic Counselor, Director Academic Counseling Program
B.A. Penn State; M.Ed. Boston College; L.D. Certificate Curry College

JAMES LEIGHTON BUNNELL (1967)
Instructor in History and the Social Sciences
A.B. University of the South; A.M. Vanderbilt

Faculty

ROBERT LAWRENCE BURNHAM (1984)
Instructor in Science
B.A. Dartmouth; M.S. University of Montana

STEPHEN DOUGLAS CARTER (1980)
Dean of Pine Knoll Cluster; Instructor in Mathematics
Sc.B. Brown; M.A.L.S. Wesleyan

JOHN PATTEN CHIVERS (1960)
Instructor in German
A.B. Wesleyan; A.M. Middlebury

SUSAN B. CLARK (AA 1969)
Instructor in Classics and History
A.B. Swarthmore; M.A. Yale

ANDREW J. CLINE (1979)
Instructor in Mathematics
B.A. College of Wooster; M.A.L.S. Wesleyan

DAVID OWEN COBB (1968)
Instructor in English on the Elizabeth Milbank Anderson Foundation
A.B. University of Maine; A.M. Middlebury

THOMAS EDWARD CONE III (1966)
Instructor in Biology
B.S. Trinity; M.A.T. Brown

CHRISTOPHER CAPEN COOK (1964)
Director of the Addison Gallery of American Art; Instructor in Art
A.B. Wesleyan; M.F.A. University of Illinois

JENIFER M. COOKE (1983)
Data Base and Alumni Records Manager
B.A. Dartmouth

ALBERT COONS (1979)
Instructor in Mathematics
B.A. Johns Hopkins

JAMES HAROLD COUCH (1953)
Instructor in Spanish
A.B., M.A. University of Wyoming

DOUGLAS EVERETT CRABTREE (1971)
Chairman Department of Mathematics; Instructor in Mathematics
A.B. Bowdoin; M.A. Harvard; Ph.D. University of North Carolina

BRUCE M. CRAWFORD (1980)
Director of Physical Plant
B.S., M.M.S. Lowell Tech

ROBERT LEE CRAWFORD (1971)
Director of College Counseling; Instructor in History and the Social Sciences
B.A. Northwestern; S.T.B. The General Theological Seminary; M.A. University of Pennsylvania

KATHLEEN MARY DALTON (1980)
Instructor in History and the Social Sciences
B.A. Mills; M.A., Ph.D. Johns Hopkins

SANDRA M. DEJONG (1983)
Instructor in English
B.A. Harvard-Radcliffe

MARY LOU DeLONG (1985)
Director of Planned Giving
B.A. Newton College of the Sacred Heart

TIMOTHY D. DEMPSEY (1983)
College Counselor; Instructor in Mathematics
B.A. Connecticut College

JEANNIE FORD DISSETTE (1985)
Dean of Admission
A.B., M.A. University of Pennsylvania

GEORGE MACNAMARA DIX (1972)
Instructor in Modern Languages
A.B. Brown; A.M. Middlebury

SHERMAN FREDERICK DRAKE (1953)
Instructor in Mathematics on the Emilie Belden Cochran Foundation
B.S. U.S. Naval Academy; Ed.M. Boston University

PAULA F. DREWNIAKY (1981)
Instructor in Mathematics
A.B. Smith

FRANK McCORD ECCLES (1956)
Instructor in Mathematics on the Independence Teaching Foundation Endowment
B.S.M.E. Princeton; M.A. Harvard

HELEN M. ECCLES (1975)
Co-House Counselor
A.B. Bryn Mawr

GEORGE HOWARD EDMONDS (1961)
Instructor in English (on leave)
A.B. Amherst; Ed.M. Harvard

PATRICIA HOPE EDMONDS (1974)
Director of Capital Development
A.B. Mount Holyoke; M.A.T. Radcliffe

CELIA ANN EVANS (1985)
Instructor in Biology
B.A. Humboldt State University

ADA M. FAN (1983)
Instructor in English
B.A. Harvard-Radcliffe; M.S. Boston University; M.A. University of Rochester

MARION FINBURY (AA 1969)
Associate Director of College Counseling
A.B. Vassar

DAVID R. FLINT (1985)
Exchange Instructor in Physics
Certificate of Education, Cambridge University; Honors degree, Bristol University

EVERETT GENDLER (1977)
Jewish Chaplain; Instructor in Religion and Philosophy
B.A. University of Chicago; M.H.L. Jewish Theological Seminary

EDWARD B. GERMAIN (1979)
Instructor in English
B.A., M.A., Ph.D. University of Michigan

MARGARET FERGUSON GIBSON (1984)
Roger Murray Co-Writer in Residence
B.A. Hollins; M.A. University of Virginia

PETER ADDLEY GILBERT (1976-81, 1984)
Instructor in English, Editor of Andover Bulletin
A.B. Dartmouth; J.D. Georgetown University Law; M.A. University of Virginia

LYDIA BUTLER GOETZE (1980)
Instructor in Biology
A.B. Radcliffe; M.A.T. Johns Hopkins

JANE SOYSTER GOULD (1985)
Protestant Chaplain
B.A. Stanford

JOHN ALLEN GOULD (1982)
Dean of West Quadrangle South Cluster; Instructor in English
B.A. Williams; M.A. Indiana University

DAVID M. GRAHAM (1978)
Instructor in Physical Education
B.S. Miami University of Ohio; M.Ed. East Stroudsburg

LYNDA ELLEN GRAHAM (1984)
Director of Foundation & Corporate Support
B.A. Brown

MARY FULTON GRAHAM (1985)
Instructor in English
B.A. Mt. Holyoke; M.A. University of Virginia; Ph.D. University of New Hampshire

MARY M. GRAHAM (1978)
House Counselor

WILLIAM FRANKLIN GRAHAM (1952)
Clerk of the Faculty; Instructor in Mathematics
S.B. University of Michigan

- RICHARD K. GROSS, S.J. (1981)
Roman Catholic Priest; Instructor in History and the Social Sciences and Religion and Philosophy; Co-Director of Community Service Program
A.B. Boston College; M.A. London School of Economics; M.Div. Weston School of Theology
- CHRISTOPHER JUDE GURRY (1974)
Instructor in History and the Social Sciences
A.B. Harvard; M.A. Tufts
- SARAH CRAVER GURRY (1982)
Director of the Parent Fund; Associate Director of Annual Giving
B.S. University of Vermont; M.A. Harvard Graduate School of Education
- THOMAS ROBERT HAMILTON (1969)
Chairman Biology Department; Instructor in Biology
B.S. Tusculum College; M.S. University of Pennsylvania; M.A.T. Brown
- EDMOND EMERSON HAMMOND, JR. (1953)
Instructor in Mathematics on the Jonathan French Teaching Foundation; Computer Systems Consultant
S.B. Haverford; Sc.M. Brown
- LAURA HANFT (1985)
Instructor in English
B.A. Williams; M.A. Brandeis; J.D. Harvard Law
- FRANK LEE HANNAH (1968)
Instructor in Mathematics
A.B., A.M. Dartmouth
- ANN H. HARPER (1979)
Instructor in English
B.A. University of Pennsylvania; M.A. University of Chicago
- JUDITH ANN HAUPIN (1985)
Associate Comptroller
B.A. SUNY at Albany
- BARBARA E. HAWKES (AA 1972)
Instructor in Biology
A.B. Tufts; M.A. Northeastern
- KEVIN P. HEELAN (1983)
Chairman Department of Theater; Instructor in Theater
B.A. St. Mary's College of Maryland; M.F.A. Smith
- KATHERINE ANNE HENDERSON (1984)
Assistant Director of Athletics
B.S. State University of New York; M.A. University of New Hampshire
- VICTOR WILLIAM HENNINGSEN III (1974-1979, 1985)
Dean of Flagstaff Cluster; Instructor in History and the Social Sciences
B.A. Yale; A.M. Stanford; Ed.M. Harvard
- HENRY LYNN HERBST (1972)
Instructor in French
A.B. Hamilton; A.M. University of Pennsylvania
- SALLY CHAMPLIN HERBST (1974)
Instructor in French
A.B. Mount Holyoke, M.A. Tufts
- ALOYSIUS JOHN HOBAUSZ (1968)
Director of the Audio-Visual Center
S.B. Puskas Telecommunication Institute, Budapest
- OLIVIER HOCHET (1985)
Visiting Fellow in French
B.A. St. Vincent; Licence de Philosophie University Rennes
- THOMAS SALKALD HODGSON (1977)
Instructor in Religion and Philosophy
B.A. Williams; M.A. Yale
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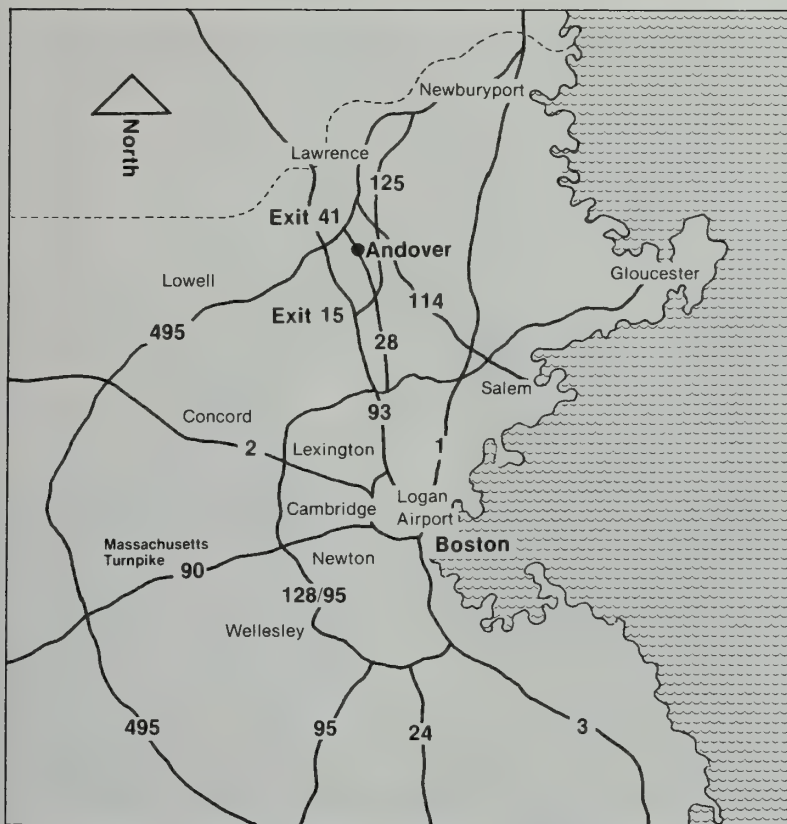
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Instructor in Physical Science, Emerita

Centerville, Massachusetts 1967–1985



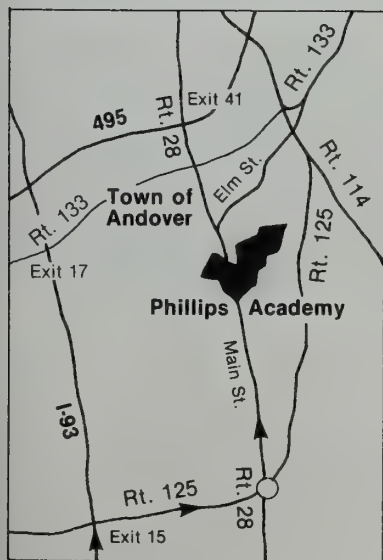
TRAVELING TO ANDOVER

If traveling by car from Boston, take Route 93 north for about 19 miles. Take Exit 41, then turn right (east) on Route 125 for 2 miles. Turn right onto Route 28 and go north about 4 miles to the Andover campus. Turn right at the Bell Tower on the corner of Route 28 and Salem Street. The Admission Office is the first building on the right.

If driving from Logan Airport, follow the signs to Boston via the Sumner Tunnel and follow Route 93 north signs.

From Route 495 north or south take Exit 41A marked Andover and proceed south on Route 28 through the town of Andover. The Phillips Academy campus is approximately one mile south of the Andover center. Turn left on Salem Street, by the Bell Tower.

Merrimack Transportation Co. runs buses to Andover from the Transportation Building in Park Square, Boston. Visitors should call the bus terminal at (617) 686-2777 for up-to-date information.



Inns and Motels in the Area

Andover Inn
Chapel Avenue
Andover
(617) 475-5903

Holiday Inn
Winthrop Avenue
Lawrence
(617) 686-9411

Koala Inn
River Road
Andover
(617) 685-6200

Shawsheen Manor
No. Main Street
Andover
(617) 475-8370

Sheraton Rolling Green Motor Inn
Lowell Street
Andover
(617) 475-5400

Hendricks' Bed and Breakfast
(617) 475-3698



INDEX TO BUILDINGS

- 1 Abbey House*
 - 2 Abbot Hall
 - 3 Abbot Stevens House*
 - 4 Adams Hall*
 - 5 Addison Art Gallery
 - 6 Alfred E. Stearns House*
 - 7 Alice T. Whitney House*
 - 8 Alumni House*
 - 9 Phillips Hall
 - 10 America House*
 - 11 Andover Cottage*
 - 12 Andover Inn
 - 13 Arts and Communications Center
 - 14 Bancroft Hall*
 - 15 Bartlet Hall*
 - 16 Benner House (Art)
 - 17 Bertha Bailey House*
 - 18 Bishop Hall*
 - 19 Blanchard House*
 - 20 Borden, Memorial and Abbot Gymnasiums
 - 21 Bulfinch Hall (English)
 - 22 Burt House*
 - 23 Carter House*
 - 24 Case Memorial Cage
 - 25 Chapin House
 - 26 Churchill House*
 - 27 Claude M. Fuess House*
 - 28 Clement House*
 - 29 Cochran Chapel
 - 30 Commons (Dining Hall)
 - 31 Cooley House
 - 32 Day Hall*
 - 33 Double Brick House*
 - 34 Draper Cottage
 - 35 Draper Hall
 - 36 Eaton Cottage*
 - 37 Elbridge Stuart House*
 - 38 Evans Hall (Science) and Office of Academy Resources
 - 39 Flagg House*
 - 40 Foxcroft Hall*
 - 41 French House*
 - 42 Frost House*
 - 43 George Washington Hall
 - 44 Graham House (Psychology)
 - 45 Graves Hall (Music)
 - 46 Hall House*
 - 47 **Hardy House (Admissions Office)**
 - 48 Henry L. Stimson House*
 - 49 Isham Infirmary*
 - 50 Johnson Hall*
 - 51 Junior House*
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 - 53 Morse Hall (Mathematics)
 - 54 Morton House* (Alumnae)
 - 55 Nathan Hale House*
 - 56 Newman House*
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 - 58 Nineteen Twenty-Four House
 - 59 Office of Physical Plant
 - 60 Oliver Wendell Holmes Library
 - 61 Park House*
 - 62 Paul Revere Hall*
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 - 68 R.S. Peabody Foundation and Archaeological Museum
 - 69 Rockwell Hall*
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Tel. (617) 475-3400

**1988-89
Andover
Course of Study**

Phillips Academy



Course of Study 1988-1989

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Course of Study

The curriculum of Phillips Academy comprises a required core of studies believed to be fundamental to a liberal education and elective courses designed to fit the special needs and interests of the individual student. Placement in the year-level of a subject may be independent of a student's grade in school; through advanced placement at entrance or accelerated courses, many students fulfill requirements ahead of the normal year, thereby gaining increased opportunity for college-level or other elective courses. Instruction is given in all subjects usually required for entrance to higher institutions.

Classroom groups are small enough to permit individual attention, and students are placed in sections fitted to their skill level. Accelerated sequences and advanced courses offer particularly able and well-prepared students opportunity to progress at a rate commensurate with their ability and ambition. Most departments offer courses beyond the level of preparation for college.

For full membership in a given class, students should have credit for the work of the lower classes or its equivalent. However, students are rated as members of a given class if their deficiencies for full membership in it do not exceed a certain number of trimester courses.

Every student is assigned to an Academic Advisor, who helps in the selection of courses that will meet Andover's diploma requirements, college entrance requirements, and the student's particular interests. Students should familiarize themselves with the Academy's basic curriculum—both its requirements and its flexibility.

Members of the Upper Middle and Senior classes should become aware of the entrance requirements of the colleges they may wish to enter.

The Trimester Plan

The academic year is separated into three trimesters. There are two types of weekly class schedules: one during which classes meet only Monday through Friday, and the other during which classes also meet on Saturday morning. There are roughly equal numbers of these five and six-day weeks in each trimester. Within a given week classes are scheduled to meet according to varying patterns:

some for four forty-five minute periods; others for five such periods; and a few seminar and studio courses for two double-period blocks. Many departments offer yearlong courses as well as those which are term-contained (completed in one trimester). The diploma requirements are stated in terms of full-year courses or trimester courses, depending on the academic area involved.

Special courses in Foreign Languages

Special courses covering the work of two years in one are open to qualified Seniors in Chinese, German, Greek, Italian, Latin, Russian, and Spanish. These 10-20 courses are designed primarily for students of proven linguistic ability wishing to begin a second or third language in their Senior year, and therefore are not recommended for students of limited language ability. Entering Seniors with no previous foreign language experience must pass a 10-20 course as a diploma requirement.

Accelerated Sequences and Advanced Placement

The Andover curriculum offers accelerated sequences in most departments. It provides special programs in the modern foreign languages, designed to cover four years' work in three—or five years' work in four. The programs are open, on invitation of the departments, to especially able and ambitious students.

A large number of Phillips Academy students take College Board Advanced Placement Tests in May to establish advanced placement in college courses or credit toward the college degree.

Advanced Placement Examinations are offered in: American History, Art History, Biology, Chemistry, Computer Science, English, European History, French, German, Government and Politics, Latin, Mathematics, Music, Physics, Spanish, and Studio Art (portfolio).

Independent Projects

With the approval of the Dean of Studies and in accordance with requirements established by the Faculty, a student may substitute independent work for some portion of the normal course load. An independent project may replace a given course for up to three trimesters of a student's stay at the Academy, or may replace all courses during a given trimester. In either case, the work is done

under the supervision of a member of the Faculty.

Off-Campus Programs and Projects

The school offers several off-campus residential programs. The *Washington Intern Program*, in which Andover joins with Exeter, allows a group of Upper Middlers and Seniors to spend the Spring Term living together in Washington and working in the offices of U. S. Senators and Congressmen. (See the History section.)

Selected students enrolled in Spanish at the third level or higher may elect a residential Spring Term of study in Mexico, or a Winter Term in Barcelona, Spain, as part of an exchange program.

Selected students of French may participate in a Fall Term exchange in Paris, France, or may spend the Winter Term in Antibes, France, attending local schools and living with a family in the city.

There are also opportunities for students to spend a term living and studying in Italy or Germany.

In addition to school-sponsored programs, the trimester plan provides an opportunity for individual Seniors to arrange off-campus projects related to their special interests. Some Seniors have worked as interns with officials in local government and members of the Massachusetts legislature. Others have carried out projects in the arts under the supervision of professionals outside the faculty. Development of such projects depends upon individual initiative in the investigation of opportunities and careful planning of a course of study that will meet diploma requirements and also free a block of time during the appropriate term. Participation in any off-campus project or program must be approved by the Dean of Studies.

School Year Abroad

Students may elect to spend their Upper Middle or Senior Year studying in France or Spain with *School Year Abroad*, originated as an off-campus program by Andover, later joined as a sponsor by Exeter and St. Paul's. Students live with host families, while pursuing a course of study under the supervision of teachers from the three original sponsoring schools. Although *School Year Abroad* is now an independent program, it provides students with courses that earn full academic credit at Andover and with the experience of immersion in a foreign culture. Students wishing to participate should

consult their Academic Advisor and the *School Year Abroad* office (located in Samuel Phillips Hall on the Phillips Academy campus) for guidance in the selection of courses for the years prior to and following the year abroad.

The Mountain School Program

The Mountain School Program of Milton Academy is a semester-long program for eleventh graders which offers students the opportunity to enjoy a different living and learning experience on a 300 acre farm in Vermont. Phillips Academy students may participate Fall Term only. Students will continue their academic courses in addition to activities which will emphasize practical skills and crafts. Students will work on The Mountain School farm which supplies most of the food and heat for the school.

Summer Session

The *Andover Summer Session* is a six-week academic enrichment program for boys and girls of high school age. Students who wish to receive Phillips Academy credit for courses taken at the *Andover Summer Session* must receive prior approval from the chairman of the department involved.

Planning a Program of Studies at Andover

The following is designed to help Andover students and their parents to understand the curriculum, and to show the major decisions, and their consequences, which face students at each stage of the four-year academic program.

Workload

All new students are advised to carry only a normal program of five courses each term in the Junior, Lower Middle, and Upper Middle years. The requirement for the Senior year is four courses or the equivalent of the fourth course—that is, independent work equivalent to a course. Upper Middlers and Seniors may elect to adjust their workload by carrying four courses or five courses in any trimester during their last two years as long as the total for the two years comes to twenty-seven trimester units.

In most courses, especially those taken to meet diploma requirements, class time and homework together can be expected to require a total of about 9 hours per week. Certain upper-level elective courses, as noted in their descriptions, may require more than the standard 4 to 5 hours of homework per week.

Academic Advising

Each student has an Academic Advisor; this member of the Faculty is responsible for counseling the student in the planning of his or her course of study at Andover. The Advisor meets with the student during the Orientation period prior to the opening of school in September to review the course selections which the student has made during the previous Summer or Spring. The Advisor must approve the selections for the Fall Trimester at this time, and those for the Winter and Spring Trimesters, respectively, during conferences held later in the year.

Within the diploma requirements, programs of study are determined by the student's long-range needs and aspirations—insofar as these can be identified. These needs may include college and career plans, strengths and weaknesses as revealed by previous performance and aptitude tests, and character and personal development.

In addition to the Academic Advisor, the House Counselor or Day Student Counselor must also approve the student's course selection for each trimester. From time to time during the academic year, the Counselor will report to parents concerning the student's growth and progress. Late each spring students in the three lower classes and their respective Academic Advisors will prepare a selection of courses for the coming year; a copy of this selection will be mailed to parents in June.

Although the student is ultimately responsible (within the Diploma Requirements and other guidelines and policies of the Faculty) for the selection of his or her courses, the Academic Advisor will welcome any information and suggestions that parents may wish to offer.

Diploma Requirements

The basic diploma requirement is the satisfactory completion of a four-year secondary school program, of which at least three trimesters must be at Andover; the student must be in good standing

(not on Probation or under Suspension) at the time of graduation. A student who has been dismissed is ineligible for a diploma unless readmitted.

A student's required program normally includes nine trimester credits in a foreign language, eight in mathematics, three trimester credits in United States History, plus an additional trimester course in history taken at the Upper Middle or Senior level, a full-year course in a laboratory science, (for Juniors who entered in September 1987, and for all new students entering in September 1988 and thereafter, an additional three trimesters of science will be required), one trimester of art (usually *Visual Studies-Art 10*), one trimester of music (usually *The Nature of Music-Music 20*), and nine of English—these to include *English 10* (for ALL entering Juniors), a yearlong course of competence in writing and reading and a three-trimester sequence of general literature. In order to be eligible for a diploma all students must satisfy the swim requirement of the Department of Athletics. Certain diploma requirements vary with the class level at which the student enters Phillips Academy. Entering Juniors and Lower Middlers must pass *Physical Education 10* in addition to required athletics; all three and four-year students must pass, prior to graduation, a one-trimester course offered by the Department of Philosophy and Religious Studies. Entering Upper Middlers need pass only one trimester of either art or music at the Academy. Entering Seniors are not required to take either art or music. Some modifications of the language requirement are made for entering Upper Middlers and Seniors. Entering Seniors with no previous foreign language experience must pass a 10-20 course in a foreign language. A Senior must *earn* a minimum of twelve graded trimester credits during the Senior year. Seniors must have passing trimester grades for all courses taken during their Spring Trimester. Independent Projects are counted as graded courses.

Credits (trimester) required for the diploma are:

For Entering Juniors 54

For Entering Lowers 51

For Entering Uppers 48

For Entering Seniors 48

Newly Admitted Students

Students entering for their first year are sent placement material, including some forms for present

teachers to complete and a self-administered diagnostic test in elementary algebra. These items are used by the Academy to aid in proper placement or recommendation of course levels. New students are also asked to complete to the best of their ability a Course Selection form, indicating the courses that they wish to take during the coming year. Although the placement material may alter somewhat a student's preliminary selections, it is helpful, for planning purposes, to know the levels that each student thinks he or she is ready to enter.

The Main Choices at Each Stage of a Four-Year Program

While a student's program of studies is adapted each year to his changing situation, the *future consequences* of each course should be noted, for certain choices in one year open the way to later options and may close the door to others.

Academic Program Guidelines

In order to promote both breadth and depth in students' academic programs, the Faculty has voted the following guidelines, which are in addition to the Diploma Requirements listed above. These represent what the Faculty *strongly urges* students to do. The Academic Advisors recognize that there will always be some acceptable student programs which do not follow these guidelines.

All Juniors and Lowers should take English, mathematics, and foreign language every term.

By the end of Lower year each four-year student should have taken some history and some science.

By the end of Lower year each four-year student should have taken *Art 10* or *Art 11*.

All Uppers should take English all year.

In their Upper and Senior years students should take a total of at least four trimesters of mathematics and science, with at least one trimester in each of these two areas.

All Seniors should take, during each term, a course in which they do some writing in the English language.

All students will be advised to take some science in addition to the one-year requirement.

All three-and four-year students will be advised to take more than the minimum diploma requirements in the arts (Art, Music, Theatre and Dance).

JUNIOR YEAR

Each trimester a Junior must take five courses,

only one of which may be a Pass/Fail course. Students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the spring.

In selecting courses, students are reminded to check the diploma requirements. A Junior's program should resemble the following outline:

1. Math—enter the sequence by placement of the department;
2. Foreign Language—begin sequence (usually a yearlong course at the 10-level);
3. English—*English 10*
4. Elective [Art, Classics, Computer, History,
5. Elective [another Language, Music, Physical Education, RelPhil, Science, Study Skills, Theatre, Dance.]

LOWER MIDDLE YEAR

Each trimester a Lower Middler must take five courses, only one of which may be a Pass/Fail course. New students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the Spring. A few students take the CEEB Achievement Tests during the Lower Middle year. In selecting courses, students are reminded to check the diploma requirements. A Lower's program should resemble the following outline:

New Students

1. Math—(usually *Mathematics 19* or *Mathematics 21*);
2. Foreign Language—enter the sequence by placement of the department;
3. English—enter sequence (*Competence*);
4. Elective [Art, Classics, Computer, History,
5. Elective [another Math, another Language, Music, Physical Education, RelPhil, Science, Study Skills, Theatre, Dance.]

Returning Students

1. Math—continue the sequence (usually *Mathematics 21, 22, 32*);
2. Foreign Language—continue the sequence;
3. English—continue sequence (*Competence*);
4. Elective [Art, Classics, Computer, History,
5. Elective [another Math, another Language, Music, RelPhil, Science, Study Skills, Theatre, Dance.]

N.B.

Students planning to be off-campus for a term (e.g., *Term in Mexico*, *Washington Intern Program*, etc.) should avoid yearlong courses during that year. Students wishing to participate in the *School Year Abroad Program* during their Upper Middle year should discuss these plans with their Academic Advisor and seek guidance for the selection of courses for the Lower Middle Year. Participation in any off-campus project or program must be approved by the Dean of Studies.

UPPER MIDDLE YEAR

During the Upper Middle and the Senior Years, a student must accumulate a total of 27 trimester units in blocks of four or five courses per trimester. A Pass/Fail course may be elected as a fifth course only.

New students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the spring. Uppers should take the Preliminary Scholastic Aptitude Tests (PSAT) in the fall; all take the CEEB Scholastic Aptitude Tests in January; and many take the CEEB Achievement Tests in the June of their Upper Middle year. Some also take the CEEB Advanced Placement Tests in June of their Upper Middle Year. As a matter of general policy Academic Advisors encourage "depth" in the selection of courses for the Upper Middle Year. Many students satisfy their United States History requirement during their Upper Year. In selecting courses students are reminded to check the diploma requirements. An Upper's program should resemble the following outline:

New Students

1. Math—enter the sequence by placement of the department;
2. Foreign Language—enter the sequence by placement of the department;
3. English—begin sequence (*Competence*);
4. Elective [Art, Computer, History, another
5. Elective [Math, another Language, Music, RelPhil, Science, Study Skills, Psychology, Theatre, Dance.

Returning Students

1. Math—continue the sequence (usually *Mathematics 34, 35, 36*);
2. Foreign Language—continue the sequence;

3. English—continue the sequence (usually *Lit B (T2), Lit C*);
4. History—usually *History 30 (T2), 31 (The United States)*;
5. Elective [Art, Computer, another English, History, another Math, another Language, Music, RelPhil, Science, Study Skills, Psychology, Theatre, Dance.

N.B.

Students wishing to take an *Off-Campus Independent Project* for a trimester of their Senior Year should avoid yearlong courses during their Senior Year. Participation in any off-campus project or program must be approved by the Dean of Studies.

SENIOR YEAR

During the Upper Middle Year and the Senior Year a student must accumulate a total of 27 trimester units in blocks of four or five courses per trimester. A Pass/Fail course may be elected only as a fifth course; however, an Independent Project, though marked on a Pass/Fail basis, is counted as a graded course.

A Senior must *earn* a minimum of twelve graded trimester credits during the Senior Year. Seniors must have passing trimester grades for all courses taken during their Spring Trimester. Many Seniors retake the CEEB Scholastic Aptitude Tests in November and the CEEB Achievement Tests in December, and take the CEEB Advanced Placement Tests in May. In selecting courses students are reminded to check the diploma requirements. A Senior's program should resemble the following outline:

New Students

1. Math—enter the sequence by placement of the department; if the requirement is not yet satisfied enter *Mathematics 40*;
2. Foreign Language—enter the sequence by placement of the department if the requirement is not satisfied;
3. English—usually *English 300-12*;
4. Elective [Art, Computer, another English, History, another Math, a 10-20
5. Elective [Language, Music, RelPhil, Science, Study Skills, Psychology, Theatre, Dance.

Returning Students

Usually most diploma requirements have been satisfied. Careful selection of electives for continued depth in the student's chosen areas is encouraged.

Transferring and Dropping Courses

To transfer or drop a course, a student must obtain an official transfer slip from his or her Academic Advisor. This slip is then taken *as soon as possible* to the Scheduling Officer in George Washington Hall. Transfers into term-contained courses must take place during the first six calendar class days of the term. No course may be dropped after the end of the fourth week of classes of any term. Students wishing to drop yearlong or T2 courses prior to the normal end of the course, and after the first six calendar class days of the course, may do so only by gaining the approval of a group of five: the Department Chairman, the Dean of Studies, the student's House Counselor, Academic Advisor, and Instructor. Credit is granted at the discretion of the Department Chairman and only if the student is passing the course at the time it is dropped and only for that portion completed. Yearlong and T2 courses are considered as long-term commitments.

Attendance

Students are expected to attend all academic classes.

Instructors, if approached in advance, are permitted (but not required) to excuse students from a class meeting if the absence from that meeting will not add to weekend time. Only Cluster Deans may give permission to extend weekend time, and they may do so without consulting Instructors.

Failed Courses

In most cases, continuing students may attempt to receive credit for a failed course by taking a make-up examination. Spring Term Senior Failures may be made up only following Commencement.

Computer Center

A computer center, located in the lower level of the Oliver Wendell Holmes Library, is available for student use. It houses two computer classrooms and a third lab filled with an array of Macintosh, Apple

Ile and Zenith (IBM compatible) computers. The center is open during the regular operating hours of the library. A wide range of software is available, and instruction in computer usage is provided.

Personal Computers

Though there is no expectation that they do so, students are permitted to bring personal computers to the School and keep them in dormitory rooms (providing the monitor may not also be used as a television receiver). However, Phillips Academy can assume no responsibility for the care, security, or maintenance of these student-owned units. Further information concerning personal computers is available, upon request, from the director of the Computer Center.

College Entrance Examination Board Test Dates

Tests will be held on campus in 1988-89 as follows:

October 15	PSAT/NMSQT (<i>Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test</i>)
November 5	SAT/ACH
December 3	SAT/ACH
January 28	SAT/ACH
May 6	SAT/ACH
June 3	SAT/ACH
May 8-19	AP (<i>Advanced Placement Examinations</i>)

Key to Course Designation

A course number ending in "0" denotes a yearlong course (Example: *Math 10-0*). A number ending "123" indicates that the course is term-contained, but sequential, and may be taken for one, two, or three terms (Example: *Art 26-123*). A number ending in a single digit "1", "2", or "3" indicates a course that is term-contained, but one that may be taken only once (Example: *Music 20-2*). The designations 1, 2, and 3 indicate the trimester during which the course is offered: 1 = Fall; 2 = Winter; 3 = Spring. Some courses require a two-term commitment; they are indicated by a "(T2)" following the course name (Example: *Physics 52-12 Advanced Physics (T2)*). Check carefully each course descrip-

tion for any other limitations: Prerequisites, permission of instructor or department chairman required, etc.

Immediately below each course number is a 4-digit number in parentheses. This identification number (often referred to as the "computer number") is used for data-processing files and is required when a student registers for courses. The final digit of the computer number has roughly the same meaning as the last digit of the course number:

Final Digit: Indicates:

- 0 Yearlong course
- 1 Course offered in Fall Trimester
- 2 Course offered in Winter Trimester
- 3 Course offered in Spring Trimester
- 4 T2 course offered in Fall and Winter
- 5 T2 course offered in Winter and Spring

Course Descriptions

Art

The diploma requirement in Art is as follows: entering Juniors and Lowers must take a trimester course in a Studio Art; an entering Upper must take a trimester course in a Studio Art or Music at the Academy; neither a Pass/Fail course nor an Art History Course is accepted as fulfilling the requirement. The basic course, *Visual Studies*, covers a broad range of material, is open to students of all abilities and experience, and is a prerequisite to almost all elective courses in Art. Exemption from this **prerequisite** is granted only on the basis of a portfolio of work judged satisfactory by the Chairman of the Department in collaboration with the teacher of the course which the student desires to enter. An acceptable portfolio should contain examples of two-dimensional work, three-dimensional work (slides or photographs are acceptable), and photography.

The College Entrance Examination Board offers students the opportunity to gain Advanced Placement in Studio Art in many colleges and Art Schools, thus enabling a student to by-pass basic design courses. Students must submit a portfolio of slides and original work to Princeton in May. Students interested in Advanced Placement should enroll in *Art 315-1* and two subsequent

terms in Art.

Students wishing to apply for an independent project in photography will not be eligible until they have taken *Art 12*, *Art 26*, and two terms of *Art 306*.

With the exception of *Art 40* and *41*, no Art course, if failed, can be made up by examination.

Students should expect to help pay for art materials. Cameras are available for loan to scholarship students taking photography.

INTRODUCTORY STUDIO COURSES

10—1 Visual Studies

- (0101) Five prepared class periods. Not recommended for Juniors. In its emphasis on visual observation, interpretation, and organization, the basic course is designed to provide an understanding of how visual information is made and transmitted. Along with discus-
- 10—2 sion of design problems, the student receives experience in photography, drawing, two-dimensional design, and three-dimensional construction. Previous experience in art is not required.
- (0102)
- 10—3
- (0103)

11—12 Visual Studies for Juniors (T2) (a two-term commitment)

- 11—23 Four prepared periods. Strongly recommended for Juniors. This course introduces students to the language of vision through drawing, photography, video, color, structure, and two- and three-dimensional design. Studio projects are coordinated with visits to the Addison Gallery where students study original works of art that instruct and clarify their own art making activity. The course will fulfill the diploma requirement in art and will serve as the equivalent of *Art 10* as a **prerequisite** for other Art courses.
- (0115)

16—12 Extended Visual Studies (T2) (a two-term commitment)

- (0164) In addition to the material covered in *Art 10*, this course includes video, art history, and 3-D design, with projects in woodworking and welding. Besides fulfilling the diploma requirement, it is the preferred prerequisite and expanded foundation for students intending to continue in advanced studio courses. Not open to juniors.

12—1 Introductory Photography

- (0121) **Prerequisite:** *Visual Studies*. (*Art 10*, *11* or *16*)
- 12—2 An introduction to basic out-of-doors photography, the course covers fundamentals of
- (0122)

12—3 exposure, developing and printmaking. A
(0123) camera (35 mm. or 2 1/4) with manually controlled speed, aperture and focus is required; a light meter is not necessary. (Scholarship students may borrow cameras from the school.) Emphasis is on both darkroom technique and aesthetic quality. This course may be bypassed by students with previous experience through the presentation of a portfolio. Classes meet twice a week with six hours of preparation and weekly conferences with the teacher.

14—1 Introductory Ceramics

(0141) Four classes per week plus evening studios.

14—2 Basic techniques of hand-building, wheel-
(0142) throwing, and glazing. Emphasis on the

14—3 sculptural as well as the functional possibili-
(0143) ties of clay. At least one raku firing each

term, or a similar special project. No prerequisites, and does not fulfill the diploma requirement.

INTERMEDIATE STUDIO COURSES

Unless otherwise noted, the intermediate courses consist of four prepared classes each week. *Visual Studies* (Art 10, 11, or 16) is a prerequisite for all intermediate courses. Any of these courses may be taken more than once to increase proficiency, as the courses are designed to deal with individual needs.

20—1 Drawing and Two-Dimensional Design

(0201) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).

A course designed to develop drawing and two-dimensional composition skills. Drawing includes: life drawing, still life, and mono-printing. Two-dimensional design will deal with the organization of representational images, color, painting and collage. Continuation in *Drawing* (Art 20-23) or *Two Dimensional Design* (Art 23-23) in Winter or Spring is recommended.

20—23 Drawing

(0202) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).

(0203) A course designed to develop observation and drawing skills in several media, based on the assumption that drawing is an end in itself as well as a skill basic to other media. Included: one life-drawing session each week. (Ms. Veenema and Mr. McMurray)

23—23 Two-Dimensional Design

(0232) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).

(0233) The course deals with one's ability to manipulate those elements most associated with the picture plane: color, line, shape, texture, and compo-

sition of flat materials. Work includes: 1) color—free studies and collages dealing with the structural and expressive nature of color; 2) drawing—exercises using pencil, pen, and brush, figure and landscape drawing; and 3) figure-ground—expanding the structural and illusionary aspects of figure-ground as an end in itself and as a basis for graphic and advertising design. (Mr. Shertzer)

24—23 Three-Dimensional Design (T2) (a two-term
(0245) commitment)

Prerequisite: *Visual Studies* (Art 10, 11, or 16).

This course identifies some basic areas of concern—equilibrium, economy, function, scale—within an ecological frame of reference. Studio problems in design and construction will draw on the student's ability to learn and apply problem-solving techniques creatively; discussion and written exercises will ask the student to think about design as it defines the human enterprise. An introductory course in physics, chemistry or biology, taken previously or concurrently, will be helpful. (Mr. Lloyd)

25—13 Artists' Books

(0251) **Prerequisite:** *Visual Studies* (Art, 10, 11, or
(0253) 16).

Through an exploration of calligraphy or photoillustration, paper-making and bookbinding, students may turn their thoughts, feelings and dreams into book format. Initial projects will be assigned to encourage experimentation, technique and problem solving. Group critiques as well as an exploration of the historical roots of book arts and photography are integral parts of this course. (Ms. McCarthy and Mrs. Quattlebaum)

26—123 Continuing Photography

(0261) **Prerequisite:** Art 12. An extension of *Intro-*

(0262) *ductory Photography*, the course goes deeper

(0263) into technical proficiency and aesthetic quality. Technical aspects include metering tech-

niques, black and white filters, exposure and printing contrast controls, various developing styles and darkroom deviations. A camera and light meter are required. The student will be exposed to the works of various photographers so that he may gain a better sense of his own photographic style and identity. Classes meet twice a week with six hours of preparation and weekly conferences with the teacher.

27—13 Animation

(0271) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).

(0273) An introduction to the art of illusion of motion through shooting still images frame by frame with 8mm sound motion picture film, with emphasis on making a very concise and carefully planned

statement. Students may work in computer animation. (Mr. McMurray)

HISTORY OF ART COURSES

40—1 History of Art: Painting and Sculpture
(0401) Four prepared class periods. For Uppers and Seniors. Although a survey of Western Art from the cave painter to contemporary, the course examines four present-day directions by studying the historical styles as roots leading up to our time, with an emphasis on the 20th Century. (Mr. Bensley)

41—2 History of Art: Architecture
(0412) Four prepared class periods. For Uppers and Seniors. A survey of architecture and engineering from priestly civilizations to the present, the course emphasizes the architectural style as an expressive outgrowth of the culture that produced it. Combined with *Art 40-1*, this course should prepare students for the Advanced Placement Examination in Art History. (Mr. Bensley)

42—3 The American Renaissance: American Art 1876-1917
(0423) Open to all students. **Prerequisite:** *Art 40* or *Art 41*, or permission of the instructor. A survey of American art produced between the Centennial Celebration of 1876 and World War I. The course will make extensive use of the Addison's collection, which is rich in this important period in American art. Discussion of art of the mid-century landscape traditions will serve as background for examination of such topics as the American Renaissance, Aestheticism, American Impressionism, and Social Realism. Artists and their work will be discussed within the historical, social, and cultural context that produced them. Lectures and class discussions will be coordinated with close study of works in the Addison's collection. (Ms. Olney)

ADVANCED STUDIO COURSES

Visual Studies (Art 10, 11, or 16) is a **prerequisite** for all advanced courses. These courses may be taken more than once. Unless otherwise noted, Advanced Studio courses meet two double periods a week with four more hours required in the studio.

300—123 Graphics and Photography
(0701) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).
(0702) Applying photography to graphic arts, particularly through photo-silkscreen, photo-etching, computer graphics, and photo-li-

thography. Individual experimentation is emphasized in an attempt to carry the expressive force of photography beyond darkroom techniques. (Mr. McMurray)

302—123 Painting
(0721) **Prerequisite:** *Visual Studies* (Art 10, 11 or 16).
(0722) An introduction to the basic elements and techniques of painting in oils. Specific problems are assigned to study the fundamentals of color, composition and space in painting, as well as to encourage the student's individual expression. Class critiques and discussions, slides, reproductions, and occasional field trips (depending on enrollment) are also part of the course. Previous experience is helpful but not necessary; students are encouraged to sign up for the full year if possible. (Ms. Spatz-Rabinowitz)

303—13 Filmmaking
(0731) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).
(0733) This course combines viewing theatrical, documentary, and art films for discussion and criticism with the production of individual and group projects using super-8 film and/or video equipment. Course work will include developing film ideas, script-writing, shooting, editing and class critiques. (Mr. Sheldon, Mr. Bensley)

304—123 Advanced Ceramics
(0741) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).
(0742) For those who are seriously interested in the total operation from design to execution.
(0743) Hand-building, wheel-throwing, glazemaking (and some chemical analysis), responsibility for loading and firing electric, gas, raku, and salt kilns. Assigned reading and occasional field trips. Previous experience in clay is desirable. (Mrs. Bensley)

305—23 Graphics: Computer or Printmaking
(0752) **Prerequisite:** *Visual Studies* (Art 10, 11, or 16).
(0753) In the Winter Term this course will explore the major areas in the field of computer graphics: 2-D paint systems, 3-D graphics, and applications mixing photography, drawing, video and print with computer-generated and/or manipulated images. A series of small projects will cover the basics in each area. One major project follows, utilizing workstations which have image digitizing capacities and can output to slides, paper or video. Programming skills are not necessary, but students with programming experience will be encouraged to use it in accomplishing their final project.

In the Spring Term the course aims to give a student knowledge of different drawing techniques using printmaking media. If they wish, students can use computer generated images in their work. Students work with metal plate etching and dry point, collagraph and plate

lithography. Printmaking allows students to see the successive conceptual stages an artist goes through in developing an image and encourages them to look at the many possible forms their images could take rather than focusing on one final product. (Ms. Veenema)

306 Advanced Photography

Prerequisite: *Continuing Photography (Art 26).*

306-I-1 Photojournalism.

(0761) A photograph is a multi-dimensional experience. It can serve to recall persons or events; it can inform, inspire, and raise questions. It is a way of sharing an experience and one's relationship to it. The subject of this course is taking photographs that are deeply and personally felt and which, at the same time, can communicate to a wide audience. The commentary and images of several celebrated photographers will be presented for discussion. Projects will include individual photographs, essays, picture stories, journals, biographies, etc. While independent work is expected, some assignments will be given. (Mr. Wicks)

306-II-3 Photo-Manipulations.

(0773) In this course students will learn to increase the range and expressive potential of their photographs through a variety of darkroom manipulations and techniques, including multiple exposure, solarization, hand-coloring, toning and collage. Ideas involving words and photographs as well as sequencing of photographs will be discussed. The class will be conducted in seminar fashion, each student undertaking a term-long project of his or her own choosing. Class critiques will be regularly scheduled. (Mr. Baden)

306-III-2 Studio Photography.

(0782) Concentrating on portraiture and fashion photography, studio strobes are used to achieve controlled lighting. Through various darkroom techniques and manipulation, along with individual experimentation, an attempt will be made to express personal ideas. Utilizing professional models from Boston agencies, the course is an introduction to commercial photography. (Mr. Bensley)

308—123 Sculpture

(0881) **Prerequisite:** *Visual Studies (Art 10, 11, or 16).*

(0882) Offers an opportunity to work in practically every material available to the sculptor today, including wood, stone, metal, plastics,

plaster, and others. It is therefore possible for students to develop into sculpture concepts discovered in *Visual Studies (Art 10)* or *Three-Dimensional Design (Art 24)* as well as ideas drawn from their own experience. Some

outstanding work of recent classes includes the "avocado" by Seymour House '73, a thirty-foot welded construction which is now a permanent addition to the Underwood courtyard. Individual criticism is stressed. (Mr. Shertzer)

309—3 Kinetics

(0893) **Prerequisite:** *Visual Studies (Art 10, 11, or 16).*

A search for the aesthetics of movement. Individual inventiveness is stressed as students pursue projects directed toward devices that produce implied or real motion. Self-perpetuated problem-solving situations become one of the prime values and objectives of the course. Projects range from simple mobiles and mechanical sculptures to computer graphics. (Mr. McMurray)

310—123 Architecture

(0901) **Prerequisite:** *Visual Studies (Art 10, 11, or 16).*

(0902) For Uppers and Seniors. *Three-Dimensional Design (Art 24)* recommended, but not required. The design of structures for human

habitation involves a variety of basic considerations. In the fall, the course will concentrate on functional analysis of sheltered spaces and their organization. The winter term will survey methods of enclosing spaces at different scales and construction techniques, including some architectural detailing. The spring term will combine knowledge gained in the previous terms in a project or projects simulating the experience of architectural practice. The course fills the needs of students who are considering architecture as a field of concentration as well as of those who desire familiarity with the basics of environmental design. Although students are encouraged to take the course for three terms, each segment is planned to accommodate enrollment for that term alone. (Mr. Lloyd)

311—3 Contemporary Communications

(0913) Four prepared class periods. The course examines some of the bases of communication between and among people. Material includes fiction, non-fiction, poetry, drama, motion pictures, and the visual arts. **Prerequisites:** Successful completion of a course in art, music, or theatre. The course engages in group projects aimed at public presentation. (Mr. Owen, Mr. Lloyd)

315—1 Advanced Placement in Studio Art

(0951) **Prerequisite:** *Visual Studies (Art 10, 11, or 16)*

and two art courses. For Seniors who have taken at least two art courses beyond *Visual Studies*. This course is a seminar run via weekly critique sessions with instructor, and in which each student is expected to do at least nine hours of outside, independent work in

preparation of her or his portfolio for Advanced Placement or for other use. A student enrolled in this course should plan to take at least one art course or project in Winter and Spring Terms. (Ms. Veenema)

Classical Studies

The Department of Classics offers the following courses in Classical Studies designed to provide Andover students a broad introduction to Classical Civilization through history, literature mythology, and etymology. All courses are electives, open to the various classes as noted. The courses offered here require no knowledge of Greek or Latin. Courses in the Greek and Latin languages offered by the Department of Classics are described under Foreign Languages. For another course in Ancient History see *History 55-123*.

21—1 Classical Civilization: Greece

(5321) Four prepared class periods. For Juniors and

21—3 Lower Middlers. The course surveys the

(5323) achievements of the ancient Greeks from

Homeric times through Alexander the

Great, including their impact on later civilizations in such areas as literature, art, philosophy, drama, government and science.

22—2 Classical Civilization: Rome

(5332) Four prepared class periods. For Juniors and

Lower Middlers. The course introduces stu-

dents to the civilization of Rome which dominated the Western World politically for a thousand years and culturally for even longer. The developing concepts of politics, law, and empire as we know them today are discussed. The course challenges the students to consider the meaning of the Roman experience in its glorious achievement of the "Roman Peace" as well as in its "Decline and Fall."

31—1 Etymology

(5411) Four prepared class periods. For all classes.

31—2 Training in the interpretation of English

(5412) words by systematic analysis of elements derived from Greek, Latin and other Indo-Eu-

31—3 ropean languages. Exercises expand vocabu-

(5413) lary and develop precision of expression and

understanding.

32—1 Greek Literature

(5421) Four prepared class periods. Open to all

32—2 classes. A systematic study of the master-

(5422) pieces of early European civilization as seen

in their proper literary, intellectual, and his-

torical context. In what is essentially a history of ideas, the major *genres* of epic, tragedy, comedy, satire, history, erotic poetry, and philosophy are stressed as aspects of the wider evolution of early European thought which laid the basis for modern civilization. The major problems which still confront human life are explored through the writings of Homer, Aeschylus, Sophocles, Euripides, Herodotus, Thucydides, Aristophanes, Plato and others. (Dr. Pottle)

33—2 Classical Mythology

(5432) Four prepared class periods. Open to all

33—3 classes. The interest of the Twentieth Cen-

(5433) tury in Classical Mythology has stemmed

from three main sources: the psychoanalyt-

ical use of myth, progress in the field of classical archae-

ology, and anthropological study of myth. Preliminary

exploration of the works of Freud in psychology, Schlie-

mann and Evans in archaeology, and Frazer, Graves,

and Levi-Strauss in anthropology leads to the detailed

study of the myths of Oedipus, Theseus, and Agamem-

non among others. The myths are considered living enti-

ties changing in the hands of each artist who deals with

them whether it be Homer or Joyce, Aeschylus or

O'Neill, an anonymous Greek vase painter or Dali, Eu-

ripides or Strauss. Works of literature, art, and music

provide the core for the study of the use of myth in hu-

man life. (Mr. Krump)

English

The diploma requirements in English are to establish competence in writing and reading (normally by successful completion of the *Competence Course*), and to complete the *Literature Sequence* through *Literature C*. For those entering Seniors and Post-Graduates who must take *English 300*, the requirement is reduced by the appropriate number of trimesters. (Seniors and Post-Graduates are interviewed by the Department Chairman before the start of school and in some cases these students may be exempted from *English 300* to enroll in one of the 400 or 500 level English courses.) All new Lowers and Uppers enroll in *Competence*. Students entering the Junior Class must take *English 10*. Juniors may not enroll in *Competence*.

The English Department also offers specialized courses for students who have already passed their competence and literature requirements and elect to continue studying English. Related courses, whose prerequisites vary, are listed elsewhere in this booklet: e.g., under Performing Arts,

Interdisciplinary Courses, Classics Courses, and Modern Foreign Language Courses in translation. *All English courses meet for four prepared classes a week, unless the course description states otherwise. No failed course may be made up simply by passing a make-up examination.*

10—0 English

(1100) This course is required for all Juniors. As a foundation for the *Literature Sequence*, the course studies a variety of literary forms and styles. Frequent writing assignments, close reading of such texts as *The Odyssey*, *Great Expectations*, *Black Boy*, *The Tempest* and regular work with journal entries prepare the student for the *Competence* course in the tenth grade.

Juniors are also eligible to enroll in *Etymology*, which is described under *Classics*.

Normal Required Sequence (2 years)

(For Lower and entering Uppers only)

First year of sequence
Second year

Fall	Winter	Spring
	Competence	
Lit B (T2)		Lit C

(1200) Competence Course

The course is designed to teach basic skills in reading and writing. It enables a student to achieve the competence requisite for the literature sequence and the specialized courses. The course is concerned with the recognition and use of the basic elements of a sentence, sentence patterns, punctuation, paragraph development and coherence, and the composition of unified exposition. The first term emphasizes writing paragraphs and short compositions; the second term includes multi-paragraph compositions and the documented report. The third term focuses on close and accurate reading of the short story and the poem and helps students develop the skill necessary to write about these works clearly and concisely. *Competence* also encourages the acquisition of important reading skills in conjunction with the study of writing. Passages composed by skillful writers are evaluated for organization, logic, point of view, tone, diction, transitional devices. Through the use of the summary sentence, the outline, and the summary paragraph, a student learns to reduce a passage to core ideas. Texts: *English Competence Handbook*; *Writing With a Point*; *Combinations for Competence*; *The Modern Tradition*, ed. Howard; *The Norton Anthology of Poetry*.

LITERATURE SEQUENCE

Lit B (T2) (a two-term commitment)

Lit B continues the shift in emphasis, begun in the third term of *Competence*, away from basic writing training to reading and writing about literature. Here students will choose a course centered in one of three modes: Satiric, Tragic, or Mythic. Though the modes differ, the objectives of *Lit B* are common to all three: to develop the skills of literary analysis; to teach a sense of literary mode; to develop a sense of historical perspective; to teach the forms of the novel, the poem, the play; to develop a literary sensibility; and to apply analytical skills to the writing of papers.

(1224) Lit B—I (The Satiric View)

A study of verse and prose works that illustrate the nature, purposes, and techniques of satiric writings. Core Texts:

FALL TERM —*Huckleberry Finn*

Gulliver's Travels

Satire: From Aesop to Buchwald

WINTER TERM—*Nineteen Eighty-four*

Canterbury Tales

poetry from *Satire: From Aesop to*

Buchwald

The Best of Simple

(1234) Lit B—II (The Tragic View)

The course studies the tragic elements in poetry, plays, novels and short stories representing a variety of cultures and periods ranging from Sophocles' Athens to Hawthorne's New England to Marshall's Jamaica. Frequent essays will emphasize thoughtful reading and critical writing. The core texts follow:

FALL TERM —Drama by Sophocles

Wuthering Heights or *Frankenstein*

Drama by Ibsen

Poems by Keats, Shakespeare, Yeats,

Dickinson

A work by Erdrich, Jones, Wright,

Marshall or Hurston

WINTER TERM—A work by Hardy or Hawthorne

Heart of Darkness

Poems by Frost, Eliot, Kunitz, Olds,

Lowell, Bishop, Hayden, Vallejo, Ne-

ruda; Anthologies of black and native

American poetry: Morrison, Gor-

dimer, Silko, Ellison, Kingston or

Wideman

Other works may include Marlowe, O'Neill, Wharton, Miller, Tolstoy, Melville, Bellow, Dante, Fugard, O'Connor, James, Fitzgerald, Carver. Additional poets ranging

from Coleridge to James Wright may also appear in the course.

(1244) **Lit B—III (The Mythic View)**

The course explores mythic elements in a wide variety of works with the aim of developing a student's ability to respond to and write about literature. Texts should include:

- FALL TERM —*The Bible* (selections)
The Oedipus Cycle
 A Native American Creation Myth
Heart of Darkness
Song of Solomon
Grimms' Fairy Tales
 Selected Poetry
- WINTER TERM—*Moby Dick*
Huckleberry Finn
 Selected Poetry
 A work from an ethnic American background

(1263) **Lit C**

An introduction to the study of Shakespeare. At least three plays will be read, one being *Hamlet*, with an emphasis upon close textual analysis.

SPECIALIZED COURSES

Specialized Courses are open to students who have successfully completed *Competence, Literature B* and *C*. Courses numbered in the 500s are more intensive and demanding than those numbered in the 300s and 400s and may require more than the standard 4 to 5 hours per week of homework. Each course has four prepared class periods a week, unless specifically stated otherwise. Only courses with sufficient enrollment will be given.

300—12 English

- (1301) A special course for all post-graduates and one-year Seniors. Its purpose is to provide the writing and reading skills taught in *Competence* as well as to expose students to substantial works of literature. While reading plays, poetry, short stories, or novels, students undertake intensive writing exercises and learn to write effective papers of greater length. (Mr. McGraw, Mr. Price, Ms. Graham)
- (1302)

401—123 Non-Fiction Writing

- (1711) In this course writers will gain practice in these non-fiction modes: personal essay, analysis, argument, feature writing, and extended composition. There are daily writing
- (1712)
- (1713)

assignments; class work focuses on student editing. The instructors assume that students entering the course write with grammatical and rhetorical competence. Students are encouraged to submit their work for publication in newspapers and magazines. (Mr. Gould)

403—123 Introduction to Writing

- (1731) An introductory course to the writing of original stories, informal essays, and poetry.
- (1732)
- (1733) While examining examples of the genres mentioned, the student tries all these forms.

With written permission from the department chairman, a student may take this course before he has completed the normal Competence-Literature sequence. (Mr. Owen)

405—123 Literature of Two Faces

- (1751) The relationship between American and minority cultures. The course addresses one or two cultures in any given term. The instructors hope to introduce students to the myth,
- (1752)
- (1753)

magic and hard realities of ethnic experience in this country. Authors students might read include Flannery O'Connor, James Baldwin, Gwendolyn Brooks, Leslie Marmon Silko, William Faulkner, June Jordan, N. Scott Momaday, Issac Bashevis Singer, Sonia Sanchez, Imamu Amiri Baraka and Maxine Hong Kingston. (Ms. Moss, Mr. Thorn)

407—123 British Writers

- (1771) Through a selection of British poems, plays, and novels, students will become acquainted with important themes and techniques of the English literary tradition. Representative authors include Chaucer, Marlowe, Shakespeare, Milton, Donne, Hebert, Marvell, Pope, Swift, Wordsworth, Keats, Austen, Tennyson, Conrad, Hardy, Yeats, Hopkins, Lawrence, Joyce, Woolf, Forster, Larkin, and Heaney. (Mr. Gilbert, Mr. Joel)
- (1772)
- (1773)

408—123 American Writers

- (1781) A thematic and comparative study of American literature. Although the emphasis is on studying works of fiction, some sections may also examine music and cinema. The
- (1782)
- (1783)

course considers the works of linguistic and ethnic minorities and of women to be seminal in the American literary canon. Representative authors include Hawthorne, Twain, Dickinson, Fitzgerald, Hemingway, Erdrich, Baraka, Wilson, Shange, West, DeLillo, Shepard, Didion, and Walker. (Mr. Bernieri, Mr. Cobb, Mr. Thorn, Ms. Fan, Mr. Bardo, Ms. Moss, Mr. Price, Mr. O'Connor, Mr. Smith)

ALL OF THE FOLLOWING COURSES MAY REQUIRE MORE THAN THE STANDARD 4 TO 5 HOURS PER WEEK OF HOMEWORK.

500—23 James Joyce

(1802) The first term is devoted to *Dubliners*, *A Portrait of the Artist*, and *Stephen Hero*, and Ellmann's *James Joyce*; the second to *Ulysses* and *Finnegans Wake* in part. The purpose of the course is to follow the development of Joyce's method and style and to develop the skill to read important and difficult works without the aid of study guides and other secondary material beyond the Ellmann. Although the course may be taken in either term, the student gains a better sense of Joyce's genius by enrolling for two terms. (Dr. Germain)

502—12 Irish Literature

(1821) The course will begin with a brief examination of Irish history and Celtic mythology in order to broaden our appreciation and understanding of the four major writers of the Irish Renaissance: Yeats, Joyce, Synge, and O'Casey. Throughout the term we will try to draw connections between Irish politics and literature, both during the Literary Revival and today, in Northern Ireland, where "the troubles" persist. (Ms. Stephens)

504—123 Man and God

(1841) The course considers man's search for meaning in what frequently seems to be an inexplicable world. Readings include: *King Lear*, Shakespeare; *As I Lay Dying*, Faulkner; *Long Day's Journey into Night*, O'Neill; *The Plague*, Camus; *The Fixer*, Malamud; *Notes from the Underground*, Dostoevski; *The Trial*, Kafka; *Wise Blood*, O'Connor; *Nine Stories*, Salinger; *The Birthday Party*, Pinter; *Alice in Wonderland*, Carroll; *Zorba the Greek*, Kazantzakis; *The Bluest Eye*, Morrison. (Miss St. Pierre)

508—23 Directions in 20th Century Drama

(1882) The close study of significant contemporary drama. The winter term focuses on the first half of the 20th Century and plays by Shaw, Chekov, Strindberg, O'Casey, Brecht, Pirandello, and Ionesco are read; the spring term starts with Beckett, and includes plays by Williams, Bolt, Pinter, Albee, Stoppard, and Shepard. (Ms. Braverman, Mr. Owen)

509—1 Shakespeare: The Man, The Times, The Theatre, The Plays

(1891) The course focuses on six plays (representative histories, tragedies, and comedies), and the sonnets, as well as some biographical and historical readings. (Mr. Stephens, Mr. Stableford)

510—123 The Short Novel

(1901) The course examines major experimental works in this genre and questions the artistic and social forces that gave rise to these novels. Each term draws comparisons between works from diverse world cultures and different points in modern history. Students may read works by Kafka, Camus, Salinger, Vonnegut, Gardner, Walker, Oates, Mann, O'Connor, McCullers, Melville, Hemingway, Rulfo, Pynchon, Durrell, Naylor, Puig, Kotzwick, McGuane, Hong-Kingston, Le Carre. (Mr. Pepper)

512—123 Satire and Comedy

(1921) A study of both the theories and practice of satire and comedy, with emphases on the eighteenth century and the modern period. Works by authors like Pope, Swift, Sterne, Ben Jonson, Waugh, and Heller will be studied in conjunction with the visual art of Hogarth and Steinberg, and recordings of modern performers like Peter Cook, Dudley Moore, Mel Brooks, and Peter Sellers. (Mr. Regan)

513—123 Novel & Drama Seminar

(1931) The course concentrates on major works of literature since 1880, primarily on the works of Virginia Woolf, Henry James, David Storey, Franz Kafka, Flannery O'Connor, T.S. Eliot, Samuel Beckett, Eugene O'Neill, William Faulkner, Gunter Grass, Saul Bellow, Gabriel Garcia Marquez, Grace Paley, John Barth, Isaac Bashevis Singer, Robert Stone, Elie Weisel, Harold Pinter, Bertolt Brecht, and Vladimir Nabokov. Students study the "world" of each writer and compare it with that of the others. As a basis for the comparison with the classics of the past, they also study a Greek Tragedy and *The Brothers Karamazov*. Class periods are devoted to seminar discussions (often led by students) and critiques of student writing. Students regularly stage dramatic readings, cast and performed by the class. (Mr. Wise)

514—123 Creative Writing

(1941) A writing course in poetry and short fiction and the personal essay. Students may be asked to keep journals or to do short reading assignments, but the primary emphasis is on the body of work the student creates during the term. Content varies from term to term according to the instructor. (Mr. Gould, Mr. Cobb, Ms. Moss and writer-in-residence)

515—123 Literature of the Quest

(1951) Focusing on the ancient pattern of the journey, the thresholds crossed and the vision obtained, the course asks students to interpret elements of the quest from a variety of

perspectives. In the Fall Term readings include Socrates' *Euthyphro* and *Oedipus Rex*, the Abraham cycle, Beckett's *Waiting for Godot*, and Eliot's *The Waste Land*. The Winter Term considers the suffering encountered on the quest and explores themes from the gospel of Mark, *King Lear*, *The Great Gatsby*, Wiesel's *Night*, West's *Miss Lonelyhearts* and Flannery O'Connor's *Everything That Rises Must Converge*. The Spring Term questions the journey's end, reading the Amor and Psyche myth and *Alice in Wonderland*, comparing Jacob and Jesus and ending with two tragicomedies: *The Tempest* and *Who's Afraid of Virginia Woolf?* (Mr. Zaeder)

518—3 Spenser and Milton

(1963) Students read minor works of both authors as well as Spenser's *The Faerie Queene* (Books I-II) and Milton's *Paradise Lost*. (Mr. Kalkstein)

520—123 Images of Woman

(1971) This course will examine, through the study of literature, woman as she perceives herself and as she is perceived by others. It will explore works by both men and women writers and will focus on the constant and the changing image of woman in different literary periods. Readings will include: *Northanger Abbey*, Austen; *Jane Eyre*, Bronte; *Hedda Gabler*, Ibsen; *Measure for Measure*, Shakespeare; *The French Lieutenant's Woman*, Fowles; *The Awakening*, Chopin; *The Mill on the Floss*, Eliot; *The Scarlet Letter*, Hawthorne; *Surfacing*, Atwood; *A Room of One's Own*, Woolf; *Diving Into The Wreck*, Rich; *Song of Solomon*, Morrison; *Tell Me a Riddle*, Olsen; *As I Lay Dying*, Faulkner. (Ms. Fan, Ms. Braverman, Ms. Graham)

527—3 Chaucer and His Age

(1983) The sophisticated ingenuousness of the Middle Ages as seen in works by two of its greatest practitioners, Chaucer and the Gawain-poet. The focus of the course is a study of *The Canterbury Tales* in Middle English. *Sir Gawain and the Green Knight* will be read in translation. (Mr. Wilkin)

528—2 Studies in Literature

(1992) 'A Hard Rain's A-Gonna Fall': Vietnam's Influence on American Literature and Cinema.

This course will offer through literature and cinema selected glimpses of how the Vietnam War deeply influenced our culture, especially from 1960-1975.

Feature films (such as *The Deer Hunter*, *Bonnie and Clyde*, *Coming Home*, *The Killing Fields*) will be an important focus. Documentaries will also be shown. The course's reading list will embrace a wide range of material and genres. Poetry, plays, song lyrics (particularly the work of Bob Dylan), memoirs, essays, and novels shall be the foundation of class discussions.

Students will be required to keep an extensive journal, as well as present a research paper.

Readings include: *Vietnam Voices*, Pratt; *In-Country*, Mason; *A Rumor of War*, Caputo; *Born on the Fourth of July*, Kovic; *Carrying the Darkness*, Ehrhart; *Dispatches*, Herr; *One Flew Over the Cuckoo's Nest*, Kesey; *Coming to Terms* (plays); *De Mojo Blues*, A.R. Flowers. (Mr. Bardo)

The following Theatre courses, which are related to English studies, have no prerequisites: **Theatre 22 (Public Speaking)**, **Theatre 28 (Shakespearean Workshop)**, and **Theatre 53 (Playwriting)**. Other courses related to English are **Art 311 (Contemporary Communications)**, **History 66 (The Renaissance)**, and, in the Study Skills section, **Basic Study Skills, Language Skills I & II**.

Foreign Languages

Andover's requirement of at least three high school years of an ancient or modern language rests on the firm belief that direct acquaintance, through language, with the spirit and people of other lands is a psychological and intellectual resource of inestimable value for each individual, for every country, and for our common world.

The diploma requirement is satisfied by completion of three trimesters at the 30-level reached through the regular sequence, or by one trimester of 40-level reached through the accelerated sequence. Placement of new students is based on their previous school record, on the questionnaire sent to them and their current language teachers in the Spring, and, when appropriate, on a personal interview with the language chairman at Andover. Details regarding various options and the diploma requirement as it is applicable to "incoming Uppers and Seniors who begin a new language at Andover" are available from the Registrar's Office. Further information may be found in the pamphlet entitled *Foreign Languages at Andover*.

With the exception of Italian (limited to Seniors), each of our languages, ancient and modern, may appropriately be started by students of any grade, Juniors (9th) through Seniors. Most Andover students continue their language study beyond the third year. Some study a second language in addition.

Small classes, flexible placement, and opportunities for acceleration assure that each student is in

the optimum learning situation. In the case of modern languages, the foreign language is the language of the classroom. In conversation, in reading, and in writing, the goal is direct communication in the foreign language rather than through translation. The classroom experience is expanded by the language laboratory; media resources (e.g., periodicals, radio broadcasts, videotapes, movies, computers); the staging of plays; club activities; language events and programs at Andover or nearby schools. At all levels of instruction attention is focused both on basic language skills and, increasingly, on the literature, history, and various art forms which reveal the people whose languages are being studied. For information on *School Year Abroad* and other opportunities to study abroad, students should see their language instructor or the Chair of the Language Division.

Chinese

Although the Chinese language may appear mysterious to Western eyes and ears, it is actually no more difficult than any other to speak. With no conjugations, verb tenses or declensions there are some aspects which actually make it easier. To learn Chinese is to open a bridge to the Orient. Mandarin Chinese is the language of instruction. *Pinyin* is the standard Romanization system for all courses. Simplified characters are taught in early courses and traditional characters are introduced from intermediate courses on. Emphasis in beginning courses is on listening and speaking skills in typical everyday situations for learners of Chinese as a foreign language, although students are exposed at an early stage to the more challenging task of learning to read and write the non-alphabetical characters. Frequent use is made of tapes, video cassettes and computer software. Opportunities are available for qualified students to participate in a six-week study-travel summer exchange program in Harbin and a ten-week spring term exchange program in Beijing, China.

10—0 Beginning Chinese

(4410) Five prepared class periods. An introduction to modern spoken and written Chinese, stressing pronunciation and aural-oral facility, and in-

cluding the reading and writing of characters.

12—23 Accelerated Beginning Chinese (T2) (a two-term commitment) (4425)

Five prepared class periods. Especially competent students will be recommended by the department for this accelerated course at the conclusion of the first trimester of *Chinese 10*. Upon successful completion of this course, students move on to *Chinese 22-0*.

10-20—0 Accelerated First and Second-Level Chinese (4430)

Five prepared class periods. Open to Seniors, and to Uppers with permission. An intensive yearlong course covering the essential material of both *Chinese 10* and *Chinese 20*.

20—0 Second-Level Chinese

(4440) Five prepared class periods. Continued emphasis on proficiency in typical everyday situations. All essential features of Chinese grammar are covered. Texts with both characters and *pinyin* Romanization are replaced by all-character texts.

22—0 Accelerated Second-Level Chinese

(4450) Five prepared class periods. Placement is made by permission of the department. Upon successful completion of this course, students move directly to Fourth-Level Chinese.

30—0 Third-Level Chinese

(4460) Four prepared class periods. More emphasis on reading and writing. Graded readers are used as basic texts. Their contents include folk tales, stories, episodes from classical literature, biographies and introduction to Chinese history and culture. Regular written assignments, including short compositions.

40—0 Fourth-Level Chinese

(4480) Four prepared class periods. Readings, in both traditional and simplified characters, are selected to stimulate interest in Chinese culture, ancient and modern. Topics in history, literature, and current events will serve as a basis for discussions and short compositions. Graded readers and simple originals are used as basic texts. A term paper is required at the end of each trimester.

50-0 Fifth-Level Chinese

(4490) Three prepared class periods. An advanced course using original texts and featuring a survey of Chinese literature accompanied by selected readings in Chinese literature both classic and modern. There is particular emphasis on the development of a mature writing style.

(9001) Independent Project**(9002)** A pass-fail course. Under the guidance of a**(9003)** department member, a qualified student has the opportunity to do special work in an area

of choice. Application for an Independent Project must be made through the office of the Dean of Studies.

French

The French Department offers a six-year course of study. At all levels French is the language of the classroom, and in all courses the French Language is taught in a cultural context. The first two years emphasize basic language structures. The third year serves as a transition to advanced courses which offer in-depth study of the literature and civilization of the French-speaking world. Students are encouraged to supplement classroom study with travel and study in France and other French-speaking countries through participation in programs such as *School Year Abroad*, the Antibes and Paris exchange programs, and summer programs. Information on these programs may be obtained from the Foreign Language Office.

10—0 Première année

(4010) First-year French for students who have had no previous courses in the language. Five prepared class periods. Listening comprehension and the use of basic conversation patterns of French speech are emphasized. Elementary grammatical and idiomatic structures are introduced as well as appropriate reading material. Students make use of the language laboratory. Text: *French in Action*, Capretz.

11—0 Premier niveau

(4030) First level French. Five prepared class periods. This course is designed for the student who has had previous instruction in the language, but whose knowledge and skills are not secure enough for entrance to a second-level section. It is also appropriate for students with experience in other languages who wish to begin the study of French. The course emphasizes the development of oral-aural skills and prepares for *French 21* the following year. Students who demonstrate unusual aptitude and interest are invited to enter *French 22*, the second level accelerated course. Text: *French in Action*, Capretz.

21—0 Deuxième niveau

(4060) Second level French. Five prepared class periods. For students who have completed *French 10* or *French 11* and for new students who qualify

through teacher recommendations or placement examination. While continuing to develop aural-oral skills, the course involves reading non-technical French prose and writing simple compositions. Text: *Encore Une Fois*, Herbst, Sturges.

22—0 Cours accéléré. Deuxième niveau

(4070) Accelerated second level French. Five prepared class periods. Upon successful completion of this course, students are recommended either for fourth level or for two trimesters of the third level sequence to be followed by a single-trimester fourth level course. Text: *La Grammaire à L'Oeuvre*, Barson. *Le Petit Nicolas*, Goscinnny.

Third-Level Courses

A two-trimester departmental Conversation and Composition course is followed by a trimester course which creates a transition to more specialized studies.

Conversation et Composition

Four prepared class periods. Students gain practice in conversation and composition in a course which stresses the development of all four basic language skills: listening, speaking, reading, writing. The focus of the course may be chosen between the following options.

30—12 Conversation et Composition: Réalités (T2)

(4094) (a two-term commitment).

Activities and discussion spring from authentic documents of everyday life, from tickets and schedules to magazine articles. Emphasis will be placed on writing for practical purposes.

31—12 Conversation et Composition: Fictions (T2)

(4104) (a two term commitment).

Provocative short works of fiction are the starting points for discussions and for assignments in imaginative writing.

Cours spécialisé

Four prepared class periods. Each third trimester course involves learning about a particular subject in French, with language review supplied as needed. Whereas any one of the seven courses offered below could fulfill course objectives for all students, the Department prefers to offer variety, with the understanding that student choice can be accommodated only to the extent that overall enrollment permits.

32—3 Le village français

(4113) Using, as points of departure, the impressions and misimpressions which French and Americans have of each other's culture, this course at-

tempts to give the student a better understanding of the French people and their institutions as reflected in the microcosm of a town. With the student's hometown as a basis of comparison, several French towns are examined in depth, including the provençal towns of Roussillon and Cassis and a town of the student's own choice. The basic text, Wylie, *Village en Vaucluse*, is complemented by readings, lectures, original documents, and both national and regional newspapers and magazine articles.

34—3 Le roman

(4133) A particular novel is read and discussed during the term. (Novels selected in the past have included Sartre, *Les Jeux sont faits*, Camara Laye, *L'Enfant Noir*, Vercors, *Le Silence de la Mer*.)

36—3 Le cinéma

(4143) Usually one work of fiction is studied along with two or more films. The books and films for the course vary from year to year.

37—3 Le journalisme

(4153) Students study current examples of French journalism for discussion of contemporary issues, and for the better understanding of the nature of journalism and of the culture represented.

38—3 Contes

(4163) Francophone literature abounds in examples of the tale, from the fairy tales of Perrault and folk tales of various francophone countries to the satirical tales of Voltaire. This course will offer an overview of the genre, while concentrating on particular examples.

39—3 Le théâtre

(4173) An active participation course in which the student follows one play from the initial reading through its final production, taking part in each of the four major phases: reading, analysis, production, performance. (Plays presented in the past have included Camus, *Le Malentendu*, and Ionesco, *La Cantatrice Chauve*.)

40—123 La civilisation française

(4191) Four prepared class periods. The course, consisting of three term-contained units, (4192) deals with aspects of French civilization such as cultural stereotypes, history, cuisine, (4193) women's roles, and francophone cultures. Students increase their practical vocabulary through discussion of texts, films, and videotapes.

41—2 Le monde francophone en dehors de l'Europe

(4202) Four prepared class periods. As an interna-

tional colonial power France spread her culture throughout the world. The course studies the civilizations of West, Equatorial, and North (Arab) Africa as well as the French civilization of the Antilles (Haiti, Martinique, and Guadeloupe). In addition to geographical, social, and historical study, the course will include the following reading: J. Roumain, *Gouverneurs de la rosée*; Aimée Césaire, *La tragédie du roi Christophe*; F. Oyono, *Le vieux nègre et la médaille*.

42—0 Littérature française

(4210) Four prepared class periods. Emphasis is placed on class participation, vocabulary building, close analysis of major literary works, and learning to write about literature.

44—1 Cours avancé de conversation et de phonétique

(4231) Four prepared class periods. Intended for students who understand, read and write French well and who already speak at a competent level, but who need further drill in conversational patterns and idiomatic expression. Diction, elocution, and intonation are also stressed through role-playing, speeches, and debates.

45—2 Histoire de la France: la Révolution française

(4242) Four prepared class periods. This course will examine the tumultuous period in French History between 1789 and 1848 by examining the causes, events and significance of the French Revolution, including the reign of Napoleon, as well as the long-term consequences on the French nation until the mid-19th century. Emphasis will be placed not only on the historical events of the time, but their influence on the French art, music and architecture of the time.

46—3 Histoire de la France: Crises et Culture

(4253) Four prepared class periods. This course will focus on the history and culture of France from the Revolution of 1848 until the First World War, with emphasis on the prolonged struggle to institute democracy in the place of monarchy, the development as an industrialized nation with the pressures for social reform, and France's grandeur in the world as a colonial power as well as in the arts. Against this backdrop of upheaval and reform, particular attention will be paid to the study of French Impressionist painting, the music of Debussy and Ravel and the sculpture of Rodin.

51—123 Cours avancé de langue

(4261) Five prepared class periods. A course designed to meet the requirements of the Advanced Placement Examination in French Language. Open to students who have com-

pleted three terms of fourth-level French and to qualified new students. Emphasis is placed on vocabulary, conversation, composition, and reading, not only in literature, but in current newspapers and periodicals. The choice of texts is determined by the class and the instructor.

52—0 Cours avancé de littérature

(4270) Five prepared class periods. Open with departmental permission, to students who have completed three terms of fourth-level French and to others who are properly qualified. Primarily a seminar in which students discuss their interpretations of the works studied, the course also includes lectures and instruction in *explication de textes*. Preparation for the Advanced Placement Examination in French Literature includes the close reading of texts such as: La Fontaine, *Fables*; Racine, *Phèdre*; Beaumarchais, *Le Barbier de Séville*; Flaubert, *Un Coeur simple*; poetry of Apollinaire, and Baudelaire. This course may require more than the standard 4 to 5 hours per week of homework.

60—123 Littérature moderne

(4281) Two prepared class periods plus one weekly
(4282) (90 minute) seminar. Open to students who
(4283) have completed fifth-level French or the equivalent. The course studies selected novels and dramas representative of modern era. Emphasis is on particular writers and what they add to our understanding of the human condition in our times. Authors studied may include: Proust, Gide, Colette, Malraux, Mauriac, Aragon, Saint-Exupéry, Giono, Anouilh, Giraudoux, Aymé, Camus, Sartre, de Beauvoir, Hébert, Laye and Senghor.

(9001) Projets indépendants

(9002) Qualified Seniors may undertake independent study projects in French under the direction of a faculty supervisor. Those who wish to do apprentice teaching during either the Winter or the Spring Term will study the techniques and methods of modern language instruction and will practice, under careful supervision, in beginners classes. Apprenticeships are usually undertaken along with a program of independent reading and writing in French. Application for an Independent Project must be made through the office of the Dean of Studies; departmental permission is also required.

German

A major world language whose cultural heritage has enriched western civilization for centuries,

German has won a new relevance and vitality through its predominance in high technology and commerce. As the only Germanic language taught at the Academy, it also offers the student unique insights into the Anglo-Saxon roots of English, its sibling. The Department offers a 5-year course of study with the purpose of developing the ability to understand spoken German and to speak, read and write German with facility. Students who demonstrate unusual aptitude and interest are invited into the accelerated sequence. Consistent with its commitment to the spoken language, the Department often holds oral as well as written final examinations. In some courses theater is used to enliven speech development and cultural immersion. Students are encouraged to supplement their on-campus language experience through a winter or spring trimester of study in Göttingen, Germany as arranged, individually through the department and the dean of studies.

10—0 First-Level German

(4300) Five prepared class periods. The beginning course develops aural comprehension and oral expression, as well as a foundation in the basic grammar. Current text: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach.

12—23 Accelerated First-level German (T2) (a two-term commitment)

(4305) Five prepared class periods. This course is for especially competent members of *German 10* upon recommendation of their instructor. Successful completion of 12 allows students to advance to 22. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Kindergeschichten*, Bichsel.

10-20—0 Accelerated First and Second-Level German

(4310) Five prepared class periods. A yearlong introductory course whose goal is to cover the essential material of first and second-year German, 10-20 is particularly suited to students who have already fulfilled the diploma requirement and desire proficiency in another language. For Seniors, and for Uppers with permission. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Kindergeschichten*, Bichsel; supplementary materials.

20—0 Second-Level German

(4320) Five prepared class periods. The study of grammar and basic patterns is continued. Reading and writing are introduced. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Leute-*

buch, ein leichtes Lesebuch, Holschuh; Vater und Sohn, Eppert; selected readings and tapes.

22—0 Accelerated Second-Level German

(4330) Five prepared class periods. Open to competent students from 12 and to other qualified new students with permission. Successful completion of this course, which attempts to cover the essential material of second and third-year German, enables advancement to *German 42*. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Der Richter und sein Henker*, Dürrenmatt; *Biedermann und die Brandstifter*, Frisch; supplementary readings and tapes.

30—0 Third Level German

(4340) Four prepared class periods. This course emphasizes review, reading and listening comprehension, vocabulary, and written and oral expression in preparation for the College Board Achievement Test. Current texts: *German in Review*, Sparks & Vail; *Der Richter und Sein Henker*, Dürrenmatt; *Vater und Sohn*, Eppert; *Biedermann und die Brandstifter*, Frisch; selected readings and tapes.

40—123 Contemporary German Language and Culture

(4351) Four prepared class periods. This course utilizes contemporary cultural materials such as periodicals, tapes, videos, and readings to introduce students to the knowledge, skills and vocabulary necessary to engage with Germans in Germany. Normally required of those Seniors intending to study in Germany Winter Term. Among the materials used are the newspaper *Die Zeit* and the periodical *Der Spiegel*.

42—0 Advanced German Language and Literature

(4360) Five prepared class periods. This course utilizes advanced German literary works as a basis for conversation and composition in preparation for the Advanced Placement Test. Selective review is incorporated. Current texts: *Cornet*, Rilke; *Die Verwandlung*, Kafka; *Kalendergeschichten*, Brecht; *Michael Kolhaas*, Kleist; selected poems; *German in Review*, Sparks & Vail. This course may require more than the usual 4-5 hours per week of homework.

50—123 Fifth-Level German

(4371) Four prepared class periods. Open to students who have successfully completed 3 terms of fourth-level German or its equivalent, this course varies with the needs of the class but is usually a seminar in the analytical reading of modern German classics. There is frequent writing. A major term paper in German replaces the final exam. Authors currently read: Böll, Kafka, Kleist, Goe-

the, Mann and Brecht.

(9001) Independent Project

(9002) A pass-fail course. Under the guidance of a Department member, a qualified Senior has the opportunity to do special work in an area of choice. Application for an Independent Project must be made through the office of the Dean of Studies.

Greek

Through the study of Greek the Department of Classics offers students a direct entry into Greek literature, which is still unsurpassed in excellence. Students have traditionally studied Latin before going on to the study of Greek. However, Greek is not more difficult than Latin. The Greek alphabet is easily mastered in the first few class meetings, and students quickly discover that the Greek language has poetic and expressive qualities which stimulate the imagination and illuminate man's political and intellectual development. The regular sequence in Greek is *Greek 10, 20, 30, and 40*, though Upper Middlers wishing to accelerate may want to consider *Greek 10-20* followed by *Greek 30*.

10—0 Greek, First Level

(5010) Five prepared class periods. The course introduces the student directly to the Classical Greek of Periclean Athens through a series of readings which present not only the vocabulary, forms and syntax of the language but also the thoughts, feelings and actions that exemplify the Greek genius. Though preliminary selections are necessarily simplified, within the first year students are reading excerpts in their original form from such works as Plato and the New Testament.

10-20—0 Greek, First and Second Level, Accelerated

(5020) Five prepared class periods. The course is open to Seniors and Uppers. It covers in one year the essential material of *Greek 10* and *Greek 20*: basic forms and structure, along with ample selected readings from Xenophon and Plato, as an introduction to Greek literature.

13—1 Introduction to Greek

(5031) Four prepared class periods. The course is for students whose curiosity for the Greek language and literature has been aroused by their studies in other areas. For students who plan some day to study Russian or German, this course provides an excellent intro-

duction into the intricacies of a highly inflected language. The student is also treated to an inside preview of a literature which, over the centuries, has provided inspiration and models for the literature of the Western World. It is a term-contained course, but students wishing to continue with Greek will have the opportunity to do so.

20—0 Greek Second Level

(5040) Five prepared class periods. The course continues the format of *Greek 10*, with further systematic development of reading skills and control of vocabulary, forms, and syntax through the medium of more advanced selections from the Greek masterpieces, always with the purpose of understanding the spirit of the people that produced them.

30—0 Greek, Third Level: *Iliad and Odyssey*

(5050) Four prepared class periods. Selected books of the *Iliad* and the *Odyssey*, and sometimes a play of Euripides. Students examine the nature of tragedy, heroism, and self-discovery.

40—123 Greek, Fourth Level: History, Tragedy, Lyric

(5061) Four prepared class periods. In the Fall Term ancient concepts of justice and morality are examined through the works of Herodotus and Thucydides. Human tragedy is explored in a play of Sophocles or Euripides in the Winter Term. The Spring Term is devoted to the study of emotion and self-expression in the Greek lyric poets.

Italian

10-20—0 First and Second Level, Intensive

(4400) Open to Seniors, and to Uppers with permission. Five class periods. Three additional meetings (30 minutes), to be arranged, will take the place of 1/2 of the usual homework obligation on those days; these small sessions afford drill and spontaneity in understanding and speaking Italian. A college text is supplemented by selected readings, recordings, songs, and the libretti and music of Italian opera.

Latin

Through the study of Latin the Department of Classics offers students a direct entry into Latin literature, which, as the universal language of

church, court, and scholars throughout the formative years of modern Europe, can rightly be termed the mother tongue of Western Civilization and the surest index to its meaning.

10—0 Latin, First Level

(5110) Five prepared class periods. The purpose of the course is for students to learn to read Latin literature with discernment and pleasure. Students learn the basic forms and syntax through reading and oral drill. More advanced grammatical constructions (subjunctives, indirect discourse, and the ablative absolute) are introduced but not studied in depth. Attention is given to aspects of Roman civilization, word formation, and the influence of Latin on English. In addition there are readings from the literature of the Bible in Latin and some selections from Roman authors in English. The text is Lawall and Tafe, *Ecce Romani*, Books 1-3 (Longman).

10-20—0 Latin, First and Second Level, Accelerated

(5120) Five prepared class periods. For Upper Middlers and Seniors. A year-long accelerated introductory course covering the essential elements of *Latin 10* and *Latin 20*.

13—1 Introduction to Latin

(5141) Four prepared class periods. The course is for students seeking an introduction to the Latin language, or those whose studies in other languages (including English) have aroused their curiosity about the workings of languages (grammar, syntax and vocabulary). It offers special profit and fascination to students of French, Spanish, and Italian, since it illuminates much of what they already know by acquainting them with the mother language. For students who plan some day to study Russian or German it serves as an introduction to the workings of highly inflected languages. It is a term-contained course, but students wishing to continue with Latin will have the opportunity to do so. The text is Lawall and Tafe, *Ecce Romani*, Book 1 (Longman).

20—0 Latin, Second Level: Caesar, Ovid, Nero

(5150) Five prepared class periods. During the Fall Term the grammar and readings in Lawall and Tafe, *Ecce Romani*, Book 4 (Longman) are completed. In the Winter Term students read, in both Latin and English, Roman biography from the late Republic and early Empire. Selections of prose by and about Julius Caesar and Augustus as well as poems of love and mythology of Ovid are included. Students will find fascination in the Spring Term studying the biography of the imperial orge Nero and Petronius' satiric account of a feast in

Nero's time with the text, Balme, *The Millionaire's Dinner Party* (Oxford).

30—0 Latin, Third Level: Cicero, Vergil, Apuleius

(5170) Four prepared class periods. The swan song

of the Roman Republic is heard through the study of the life of Cicero with readings in Latin and English from Cicero himself, Catullus, and Livy. Systematic review of grammar strengthens the student's Latin reading skills. The poetry of Vergil is introduced in the Winter Term with *Aeneid*, Book II, as well as readings from *Eclogues* and *Georgics*. In the Spring Term the student becomes familiar with life under the Empire through the social, religious, and literary elements of Apuleius' *Golden Ass* and Juvenal's *Satires*. The basic text is Gillingham and Barrett, *Latin: Our Living Heritage*, Book III (Merrill).

40—123 Latin, Fourth Level: Vergil, Suetonius,

(5191) Catullus

(5192) Four prepared class periods. The Fall Term is

spent reading *Aeneid*, Book IV, the great tragic romance of Dido and Aeneas. The Winter

Term offers the contrast of the Silver Age prose of Suetonius' biography of the Emperor Claudius along with Seneca's *Apocolocyntosis*, a rude farce about Claudius' deification. The Spring Term focuses on the emotional lyric poetry of Catullus, the most romantic and accessible of the ancient love poets.

50—123 Latin, Fifth Level: Vergil, Tacitus, Pliny,

(5201) Horace

(5202) Four prepared class periods. In the Fall Term

the students enter the world of Book I of Vergil's *Aeneid* examining his literary form and

technique, the social and political dimensions of his epic. The Winter Term takes up selections from Tacitus' *Histories* and *Annals*. Together with Tacitus' gripping study of hopelessness and disillusion in the decaying Rome of tyrants like Nero, students read from Pliny's letters, including his eyewitness accounts of the eruption of Vesuvius and the persecution of Christians. In the Spring Term students return to the Golden Age of Augustus through the lyric poetry of Horace, whose work displays flawless control of language and timeless ethical and moral ideals. Completion of the sequence of *Latin 30, 40, and 50* will qualify the student for the Advanced Placement Examination in Latin.

Russian

Communication in Russian and a knowledge of Russian culture are essential for productive inter-

action with the U.S.S.R. in technology and science, and for achieving controlled, responsible international relations.

As of 1987, this goal has been realized for Phillips Academy Russian students through an official cultural and educational exchange with the Novosibirsk High School of Math and Science in the U.S.S.R. This term-long exchange sends PA students of Russian to attend classes at the Novosibirsk High School while Soviet high school students study here at Andover. The term concludes with a tour of several Soviet cities.

Before studying Russian, many consider it strange and difficult; but its alphabet and vocabulary have the same sources as English, and it follows the same principles of grammar. Continuous oral, visual and instructional use quickly makes Russian familiar and enjoyable.

The Russian Department offers a five-year course of study. This well-established program ensures confident progress in speaking, aural comprehension, reading, and writing. Elementary courses use computer drills to strengthen grammar skills. At the upper levels, students use Russian word processors for their compositions. Students who demonstrate unusual aptitude and interest during the first term are invited to enter special accelerated sections in the second term. It is the policy of the Department to use Russian exclusively in the classroom.

10—0 Introduction to Contemporary Russian

(4500) Five prepared class periods. A yearlong elementary course in speaking, listening, reading and writing. Texts: Kostomarov, *Russian for Everybody* (Russky Yazyk—Moscow); reference materials.

12—23 Contemporary Russian (Honors) (T2) (a two-term commitment)

Five prepared class periods. Especially competent students will be recommended for this accelerated course at the conclusion of the first trimester of *Russian 10*. Successful completion of 12 enables students to enter 22. Texts are essentially those of *Russian 10* and *Russian 20*. This course may require more than the standard 4 to 5 hours per week of homework.

13—3 A Short Course in Beginning Russian

(4523) Four prepared class periods. Open to Seniors and Uppers. A term-contained introduction to speaking, reading, and writing Russian, using conversational text materials. This course enables

students to feel comfortable with the somewhat different features of a Slavic language. It also gives a sound foundation for continuing courses in Russian language, history, and literature, whether at Andover or in college.

For another course related to Russian history and culture see History 45.

10-20—0 Intensive Contemporary Russian

(4530) Five prepared class periods. Open to Seniors, and to Uppers with permission. A yearlong accelerated introductory course covering two years in one. Texts: Kostomarov, *Russian for Everybody*; reference materials. This course may require more than the standard 4 to 5 hours per week of homework.

20—0 Intermediate Contemporary Russian

(4540) Five prepared class periods. Completion of the elementary course with continued emphasis on active use. Texts: Kostomarov, *Russian for Everybody*; Bond, *Russian Graded Readers* (Heath); reference materials.

22—0 Intermediate Contemporary Russian (Honors)

(4550) Five prepared class periods. A yearlong accelerated course open to students who have successfully completed *Russian 12* and to other qualified students with departmental permission. Successful completion enables students to advance to fourth-level courses. Texts and reading materials are essentially those of *Russian 20* and *Russian 30*. This course may require more than the standard 4 to 5 hours per week of homework.

30—0 Russian Expression: Conversation and Composition

(4560) Four prepared class periods. Reading, conversation, and writing. Texts: Pekhlivanova & Lebedeva, *Russian Grammar in Pictures* (Rusky Yazyk—Moscow); Bond, *Russian Graded Readers* (Heath). Reading materials include selections on Russian culture, history, geography, and Soviet civilization. Students use word processors in their composition work.

40—123 Advanced Russian Composition and Russian Classical Literature

(4571) Four prepared class periods. Further work in conversation and writing, and an introduction to the "Golden Age" (19th Century) of Russian literature with selected readings from Pushkin, Chekhov, Gogol, Tolstoy, as well as some Soviet writers. This course may require more than the standard 4 to 5 hours of homework per week. Students use word processors in their composition work.

50—123 The Soviet People, Their Heritage and Literature

(4581) Four prepared class periods. Fall Term: RUSSIAN LITERATURE—readings from contemporary and prerevolutionary authors.

Winter Term: SOVIET LITERATURE—an overview tracing the evolution of Russian literature from the Revolution through the war and post-war periods, and including writers in exile. Authors vary according to needs and interests of the class and may include Gorky, Bunin, Sholokhov, Bulgakov, Yevtushenko, Voznesensky, Solzhenitsyn.

Spring Term: THE SOVIET PRESS—a view of Soviet Life and culture as reflected in the media. The text is a subscription to a major Soviet newspaper. Students use word processors in their composition work.

(9001) Independent Project

(9002) Under the guidance of a member of the Russian Department, a Senior has the opportunity to do special work in Russian. It may include supervised teaching of an elementary class or work chosen in a special field. Application for an *Independent Project* must be made through the Dean of Studies.

Spanish

The Spanish Department offers a six-year course of study. Students who demonstrate unusual ability and interest during the first year are invited to join an accelerated sequence. The language of the classroom is Spanish, and extensive use is made of the language laboratory. Students learn to understand, speak, read, and write the language, and also are given a comprehensive introduction to the literature and culture of Spain and Latin America.

The Department offers various programs of study and travel abroad which enhance a student's language experience. *School Year Abroad* in Barcelona, Spring Term in Mexico, and the Madrid exchange are some of the possibilities. More information is available through language instructors.

10—0 Beginning Spanish

(4600) Five prepared class periods. A first-year course designed for those who have not studied Spanish before. The audio-lingual approach is used, stressing understanding and speaking. The textbook is supplemented by language laboratory practice

and audio-visual materials. Selected readings and writing exercises are introduced as the student acquires confidence in oral expression.

11—0 First Level Spanish

(4620) Five prepared class periods. For new students who have been exposed to Spanish but who are not fully prepared for *Spanish 20*. The course covers basic grammatical structures through an active oral approach. The text is supplemented by language laboratory practice, selected readings and writing assignments.

10-20—0 Accelerated First and Second-Level Spanish

(4630) Five prepared class periods. Open to Seniors, and to Uppers with permission of department chair. A yearlong accelerated introductory course which prepares the student for the third level. It develops proficiency in the four skills. The text is supplemented by short story and theatre selections.

20—0 Second-Level Spanish

(4640) Five prepared class periods. Emphasis is on oral communication with continued practice in reading and simple theme writing. An anthology of short stories supplements the text.

22—0 Accelerated Second-Level Spanish

(4650) Five prepared class periods. Open to students who have completed *Spanish 10* or *11* with distinction, and to other qualified students with departmental permission. An accelerated second-year course which develops communicative competence and provides intensive reading and writing practice. It enables high honors students to enroll in a 4th level course.

Third Level Courses

Intensive language practice is the focus of *all* third-level courses during the fall term. In the remaining two terms the following electives may be chosen: they are of equal difficulty and continue the development of all language skills. Enrollment for *Spanish 30A* is by permission of Department Chair.

30—1 Intensive Language Practice

(4691) Four prepared class periods. Thorough review of all grammatical structures, with particular emphasis on verb tenses (indicative and subjunctive) and idiomatic expressions. Its main goal is to develop greater accuracy and fluency in both written and oral expression.

30A—0 Spanish Language Review

(4700) Five prepared class periods. For students who have successfully completed *Spanish 20*,

but need reinforcement in basic language structures. The goals of the course are achieved through the use of an intermediate grammar text, and readings which are selected according to the needs of the students. By permission of the Department Chair.

31—23 Culture and Civilization of the Hispanic World (T2) (a two-term commitment)

Four prepared class periods. An intermediate course which takes a social-studies approach to the culture and civilization of the Hispanic world. Students must have demonstrated a strong ability for oral and written self-expression and an interest in historical and cultural themes. This course is particularly well suited for the bilingual student.

32—23 Introduction to Literature (T2) (a two-term commitment)

Four prepared class periods. An intermediate course which develops oral and writing skills through the study of Spanish and Latin American literature. The readings include short stories, poetry, plays and a novel.

34—23 Conversation and Composition (T2) (a two-term commitment)

Four prepared class periods. An intermediate course which has as its principal goal the development of conversational and writing skills by dealing with topics of a general and contemporary nature.

40—123 Current Events in Spanish

(4801) Four prepared class periods. This course is designed to expand and refine speaking, reading, and writing skills in Spanish. Students subscribe to the weekly International Edition of *El Pais*, one of Spain's leading newspapers. The articles are used as a basis for class discussions, oral presentations and weekly written analyses. At the end of the term, students produce their own newspaper and a newscast on video.

41—123 Spanish in Video

(4811) Four prepared class periods. This course exposes students to authentic and sophisticated native language usage through videos representing the major Spanish accent groups. Major emphasis is placed on dramatic representation, on the development of auditory skills and idiomatic language, on imitating native accent and intonation patterns and on refining writing skills. The course also involves reading, discussing and filming of student presentations of one-act plays, and comparative study of written and filmed versions of selected pieces of Spanish and Latin American literature.

42—0 Contemporary Spanish and Spanish American Literature
(4820)

Four prepared class periods. Short stories, plays and poems by contemporary Spanish and Spanish American writers such as Garcia Marquez, Cortazar, Rulfo, Borges, Donoso, Poniatowska, LaForet, Ferre, Fuertes, are closely examined in class and in weekly essays. Develops proficiency in all language skills.

52—0 Advanced Placement Course in Literature

(4850) Four prepared class periods. This course emphasizes discussion and analysis of literary

works in the classroom and through frequent written assignments. It prepares the student for the A.P. examination in Spanish literature. The readings include representative works of Ana Maria Matute, Unamuno, F. Garcia Lorca, J.L. Borges, Pablo Neruda. This course may require more than the standard 4 to 5 hours per week of homework.

60—123 Major Works in Spanish and Spanish

(4871) **American Literature**

(4872) Four prepared class periods. Contents vary according to the needs and interests of the student. This course is recommended for native

Spanish speakers (with solid writing skills) and students who have completed *Spanish 52*. It may require more than the standard 4 to 5 hours per week of homework.

(9001) **Independent Project**

(9002) Qualified Seniors may undertake projects of independent study in Spanish under the direction of a faculty advisor. They may also

do apprentice teaching in beginning classes under faculty supervision. Application for an *Independent Project* must be made through the office of the dean of studies.

See also Latin American Studies (History 49) listed under *History and the Social Sciences*.

History and the Social Sciences

The study of history and the social sciences provides certain kinds of knowledge, skills, and understanding fundamental to a liberal education. A study of the American past continues to be a prerequisite for a participating citizen in a constitutional republic. Vital though such study is, an understanding of our nation alone is not enough. The examination of other cultures, both European and

non-western, is crucial for broadening a student's understanding of an interdependent world. The Department of History and the Social Sciences, therefore, integrates the study of non-western cultures into courses at every grade level.

To satisfy the diploma requirement, the student must successfully complete four terms of departmental study during the 11th and 12th grades. Most students satisfy this requirement by taking three terms of *United States history* (History 30-T2 and 31) and a fourth term of a 40-level *social science* or *non-western survey*.

A student may, however, satisfy the 4th term of the requirement in other ways: (1) by taking *History 34-0*, the yearlong AP survey in Modern European History; or (2), by taking a 50-level *Survey* or a 60-level *Seminar*, if a student has passed at least two previous terms at the 10-20 level (or the equivalent) and has received permission from the department chair. For students so assigned by the HQT, the completion of *History 29-0* and *History 31* satisfies the 4-term requirement.

One of the academic guidelines instituted by the Phillips Academy faculty urges that all 4-year students take "some history" by the end of the Lower year. Accordingly, the department *strongly recommends* that Juniors take *History 16*, which for 4-year students is the prerequisite to other courses in the Western Tradition sequence (*History 17, 18*) and to courses in the Modern World sequence (*History 26, 27, 28*). Lowers also may take *History 16* and we urge them to elect courses in the Western Tradition and Modern World sequences.

Exceptional 10th graders have two additional options. If they have completed at least two terms of history/social science, have made an outstanding score on the HQT, and have received permission from the department chair, then (1) they may take *History 34-0*, the yearlong course in Modern European history; or (2) they may take *United States History* (History 30-T2 and 31).

The History Qualifying Test (HQT) is given to Lowers and certain Juniors during spring term and to all new Uppers, Seniors, post-graduates, international students, and some new Lowers during the orientation period in September. The purpose of the test is to place students in the appropriate level of history study: (1) For most students, the HQT indicates that they should begin the 3-term U.S. history sequence (*History 30-T2* and 31) in

September of their Upper year. Students may, however, wait to begin the *History 30* sequence a term later (in January) or a year later (the following September). All these students are reminded that they may elect the fourth term of the requirement only after they have completed one term of the regular *History 30* sequence. (2) The HQT indicates that some students should begin the diploma sequence by taking *History 29-0* and then complete the 4-term requirement by taking *History 31* the following year. (3) For students who have already had a yearlong U.S. history course in the 11th or 12th grade at their previous schools, the HQT indicates how they should complete the 4th term of the requirement. (4) Finally, for students interested in taking *History 30* or *History 34* in the 10th grade, the HQT gives an indication of their chances for success. Either of these two courses counts toward the 4-term diploma requirement.

In all cases, individual placement is made by the department chair.

Washington Intern Program

The Department co-sponsors, with the Phillips Exeter Academy History Department, a special Spring Trimester (mid-March through late May) program in Washington for Seniors taking, or who have taken, *History 30-31*, and for Uppers in *History 30*. The program is restricted to 15 Andover students and 15 Exeter students, competitively selected, for work as Interns in the offices of Senators and Representatives. The application process begins early in the previous fall trimester. Prospective applicants should avoid taking 0-yearlong courses. Uppers who are interns in the spring will take *History 31* during the fall of their senior year.

Phillips Academy Archives

The Department of History and the Social Sciences encourages the use of the Academy's extensive archival collection. For students who have completed *History 30-31* and are interested in pursuing work with the raw materials of history (including oral history), the Academy archivist offers a unique tutorial-research opportunity on some aspect of the history of Phillips Academy and Abbot Academy. Students undertaking archival study for credit should apply for an Independent Project through

the Dean of Studies.

COURSES IN THE HISTORY OF THE WESTERN TRADITION

Five class periods a week. For Juniors and Lower. Four-year students are expected to take *History 16* before taking other courses in the department. Together, *History 16, 17, and 18* comprise a survey of Western civilization from earliest times to the beginnings of the modern world. Although the primary goal is familiarity with our western tradition, its institutions and ideas, students will also be introduced to contemporaneous developments in the non-western world. Through the content of these courses, students will work on learning the skills and concepts vital to the study of history, and thus prepare for later, more advanced courses in this field.

16—1 Ancient History (formerly *History 20*)

(2161) Following an introductory unit on the nature of history, this course focuses on the course of human development from the prehistoric through the reign of Alexander the Great.
 16—2 (2162)
 16—3 (2163) The emergence of increasingly complex societies in the Near East and India, and the contributions of the Indo-Europeans and the early inhabitants of the eastern Mediterranean provide necessary background to an in-depth study of ancient Greece of the Hellenic and Hellenistic periods.

17—2 Classical History (formerly *History 21*)

(2172) This course continues the study of western civilization, concentrating attention on the Roman Republic and Empire, the advent of Christianity, and the origins of medieval culture. At the same time, the course will expose students to contemporaneous developments in other parts of the world: China, the Islamic World, and Japan.

18—3 Medieval History (formerly *History 22*)

(2183) The final course in this sequence will concentrate on the medieval world: its culture, institutions, and legacy. Students will be exposed to such topics as the medieval church, feudalism, the arts, the emergence of nation-states, the origins of the economic revolution, and the background to the Renaissance. While focusing primarily on Europe, considerable attention will also be given to non-western developments, principally in the Mayan civilization of Central America and in West Africa.

COURSES IN THE HISTORY OF THE MODERN WORLD

Four class periods a week. Primarily for Juniors and Lowers. Together these courses comprise a survey of the modern world from the 14th to the 20th century. In each term, the focus will be on developments in both western and non-western worlds.

26—1 The Early Modern World

(2261) A global perspective on the 15th, 16th, and 17th centuries. The course will survey developments in Europe during the Renaissance and Reformation and examine contemporaneous developments in Asia, Africa, and the Middle East. Special attention will be given to the interaction between Europe and a variety of non-western cultures during the age of exploration.

27—2 The World in the Eighteenth Century

(2272) A global perspective on the period from 1700 to 1815. The course will survey developments in Europe, Asia, Africa, and the Middle East, giving special attention to the interaction between cultures in the western and non-western worlds.

28—3 The World in the Nineteenth Century

(2283) A global perspective on the period from 1815 through World War I. The course will give special attention to the cultures of Asian and African peoples in their interactions with expanding European nations during the age of industrialization.

REQUIRED SEQUENCES IN UNITED STATES HISTORY

29—0 United States History

(2290) Four prepared class periods. For Uppers and Seniors so assigned by the HQT. The three terms are designed to cover the same material as *History 30-T2*—there is no increase in coverage. Emphasis is on skills-building. Students receive considerable individual attention, especially in their writing.

Completion of *History 29-0*, together with *History 31* in the senior year, satisfies the 4-term diploma requirement.

30—12 The United States (T2) (a two-term commitment)

(2304) Four prepared class periods. For Uppers, Seniors, and exceptional Lowers. This course, along with *History 31* and an elective at the

40-level, fulfills the four-term history diploma requirement. The first term emphasizes three goals: a survey knowledge of American history through Reconstruction by reading an advanced-level text; the acquisition of skills by daily exercises in reading, note-taking, and writing; and an in-depth study of an organizing theme. The second term emphasizes American industrialization from the post Civil War years to 1940. The goals of the first term continue, but the variety of readings and writings and the complexity of the materials increase.

31—1 The United States

(2311) Four prepared class periods. For Uppers and Seniors. The focus is on the United States during and after World War II. Prerequisite: successful completion of *History 30-T2*.

32—12 United States History for International Students

(2321) Four prepared class periods. A course for students for whom English is a second language and whose HQT scores indicate they are not ready for *History 30-T2*. The course emphasizes language skills important to the study of American history and the subject matter focuses on the founding of the republic, constitution building and how the American government works, the westward movement, the Civil War and the coming of urban-industrial, multi-ethnic America. The intention of the course is to recognize the special needs of the students and to bring them to a level of achievement so they may transfer to the 30/31 sequence in the winter or spring term, if the students wish to be candidates for the diploma. (Mrs. Lloyd)

SURVEY OF MODERN EUROPEAN HISTORY

34—0 Modern European History

(2340) Four prepared class periods. This course is open to exceptional Lowers (with permission from the department chairman) and to Uppers and Seniors, whether or not they have taken *History 30*. The course has proven to be good preparation for the Advanced Placement examination in European History. Successful completion of this yearlong course, together with a year of United States history (*History 30-31*), satisfies the department's 4-term diploma requirement.

The fall term consists of background survey of the 16th, 17th, and 18th centuries, with particular emphasis on the political, economic, and intellectual revolutions that helped to mold the modern world. The focus of the Winter Term is the period 1800-1900, with continuing attention given to the shaping of modern thought, the emergence of the nation-state, and the effects of indus-

trialism. In the Spring Term, the course covers topics in 20th century Europe; the two World Wars, and their effect; the nature of totalitarianism; the cold war and the rise of the superpowers. Reading is from primary and secondary sources, as well as fiction. Visual materials are used where appropriate.

ELECTIVES: 40-SURVEYS IN INTERNATIONAL SOCIAL SCIENCE AND NON-WESTERN HISTORY

Any of these 40-level courses counts as the fourth term of the diploma requirement. **Prerequisite:** A student must have completed at least one trimester of *History 30* or have credit for U.S. history from another school before enrolling in a 40-survey.

SURVEYS IN THE SOCIAL SCIENCES

SS41—1 Introduction to Economics

(2411) Four prepared periods. The course aims to introduce Seniors to the basic principles of economics and their application and relevance to current public policy issues. Students examine the development of the economies of the U.S. and the world, and are introduced to basic theoretical tools which help them analyze important economic issues. Classes consist primarily of discussions, although there will also be some role-playing exercises, computer simulations, class assignments, debates, guest speakers, films and student reports on their term projects. (Dr. Strudwick, Mr. Williams)

SS42—3 Urban Studies Institute

(2423) Seniors and qualified Uppers may elect for their entire spring course program to participate in a ten-week exploration of the American city, including field work six hours each week. Lawrence, Massachusetts, its history and its present shape, its people and their special problems and opportunities, is the focus of study, but the context is drawn through investigation of broad historical, social, and economic issues which affect most of urban America. Lawrence has always been an immigrant city, and nearly a half of Lawrence's public school students are now of Hispanic background. In addition to their academic course work, students explore a central aspect of urban life by serving as tutors in an intensive English language training program for a group of these Lawrence children; the tutoring program, which will be designed by Institute students and staff, uses dramatization and one-to-one tutoring to strengthen the children's oral and literary

skills. Knowledge of Spanish is useful, but not essential.

All students take a course in Latin American History and a course in Urban History, as well as a core course introducing developmental psychology and ethnic studies in such a way as to inform and support the fieldwork project. Students meet periodically in evening seminars with outside speakers.

Seven to nine Phillips Academy students will be selected by interview and special application. Seven to nine students from college preparatory courses in Lawrence High School will be selected in the same way. Apply to Susan M. Lloyd by December 1. Uppers who are USI participants in the spring will take History 31 during the fall of their senior year. (Mrs. Lloyd, Ms. Piana, Dr. Quattlebaum)

SS43—2 Comparative Government

(2432) Through this course, students gain an understanding of the world's diverse political structures and practices. Students will study general political concepts and compare the political systems of such specific nations as Great Britain, the Soviet Union, China, India, Mexico, and Nigeria. In studying these nations, students will examine the political implications of different types of economic and social development.

Topics for class discussion include: the sources of political power; the role of tradition, culture, and ideology in the political process; the relationships between states, citizens, and society; and the process of political change. Students in this course will be able to take the AP examination in Comparative Government and Politics.

SS44—1 International Relations

(2441) This course will focus on political and ideological clashes in the world since 1945.

SS44—3 (2443) The course will examine conflicts in Asia, Africa, Central America, and the Middle East, and will analyze the attempts to resolve those clashes both by the peoples involved and by the superpowers. Primary sources, periodicals, films, and texts will be used. (Mr. Gurry)

SURVEYS IN NON-WESTERN HISTORY

45—123 The Russian Experience

(2451) This course, primarily for Seniors, but open to Uppers with the Instructors' permission, is a survey of Russian history, literature and culture from medieval times to the present.

In the Fall Term, the focus is on the development of ideas and institutions in Old Russia and the Imperial period, through much of the 19th century. In the winter, the subject is Russia in Revolution, covering the period 1880-

1930, and in the spring attention is given to the Soviet Union over the last half-century. While any of these terms may be taken alone, students are urged to consider taking all three terms, since the course is taught as a whole, with the second and third terms building on the previous ones to develop the key themes in Russia's past and in particular to address the question of why Russian society has never developed the kind of democratic institutions with which we are familiar. Considerable attention is given to the study of literature. The course examines the significant events and ideas of the Russian past and the reflection of these events and ideas in the fiction and memoirs of authors such as Pushkin, Gogol, Turgenyev, Dostoevsky, Tolstoy, Chekhov, Gorky, Mayakovsky, Blok, Zamiatin, Babel, Mandelstam, Bulgakov, Solzhenitsyn and Aksyonov. (Mrs. Powell and Mr. Richards)

See also Russian 13 in the Foreign Language section.

46—123 Asia: China, Japan, and India

(2461) Four prepared class periods. The fall term focuses on *Modern China*. After an introduction to traditional China's religions, thought, and institutions, the course concentrates on events since 1800, emphasizing China's response to the West, and economic, intellectual, and political developments through the rise of communism in the 20th century. The course will also analyze the origins and aftermath of the Cultural Revolution and China's current relationship with the rest of the world.

The Winter Term emphasizes *Modern Japan*. Today Japan has impressed many outsiders as a uniquely homogeneous, unified, and economically effective society. This course—through an examination of the evolution from traditional to modern Japanese society—will examine the validity of that perception. After an introduction to traditional thought and feudal social structure in Japan, the course looks closely at ideas, events and developments since 1800. Readings are from historical texts, contemporary observers, sociological descriptions and literature, with a special effort to understand the outstanding features of Japanese culture, politics and economics.

The focus of the Spring Term will be on *Modern India*. The course will examine India's rich cultural traditions and see how Indian society was affected by the intrusion of British imperial rule in the 19th century. In-depth attention will be given Gandhi, the movement for Indian independence, and an examination of India's literature and politics in the context of the world today.

47—3 Africa and the World

(2473) This course focuses on contemporary issues facing the new nations of Africa, based on an historical analysis of the emergence of Africa from the

colonial period. Political and economic development of these countries, the relations between developed and developing states, the emergence of majority rule in Southern Africa, and the role of Africa in the United Nations is studied. Readings include analyses of the issues African nations confront in the modern world, novels about Africa, and speeches and articles by African statesmen.

48 The Middle East (Not offered in 1988-89.)

49—123 Latin American Studies

(2491) Four prepared class periods. This course is a survey of Latin American civilization seen through its history, literature and culture from pre-Columbian times to the present. In the Fall Term, the focus is on the Mayan, Aztec, and Inca civilizations, the Spanish Conquest, and the development of present day institutions and cultural patterns in the Iberian Colonial period. In the Winter Term, the students learn about Latin America's independence from Spain and Portugal, the republican experiment, the role of the military, the Church, the Oligarchy, and the function of class, sex and race in Latin American societies. In the Spring Term, the subject is political movements and revolutions of the 20th century, including the Mexican, the Cuban and Sandinista Revolutions. US-Latin American relations are an important component of the course in this term.

Each term can be taken independently, but students should consider taking all three terms since the course as a whole develops themes prevalent in Latin American history, in particular, the struggle against dictatorship, economic and social divisions, imperialism, and population growth. Films, and literary works of writers such as Garcia Marquez, Fuentes, Asturias, and Neruda will be used to understand how Latin Americans view their own reality. (Ms. Piana)

ELECTIVES: 50 SURVEYS

The following 50-level surveys are open to Seniors and Uppers who have completed at least one term of *History 30*. A student may elect a 50-level survey together with or prior to satisfying the 4th term of the diploma requirement at the 40-level.

SURVEYS IN THE SOCIAL SCIENCES

SS51—3 History and Mathematics

(2513) Four prepared periods. **Prerequisite:** permission of the instructor. This course provides

an introduction to the ways in which mathematics and statistics are employed in the study of history. Attention focuses on three main areas: elementary statistics and data analysis; entertaining historical controversies; and the logic of historical inquiry. To accomplish these purposes, participants do assigned homework problems in mathematics and applied statistics, read exemplary works in the field of quantitative history, and complete a history research project. (Dr. Strudwick)

SURVEYS IN HISTORY

54—123 Modern European History

- (2541) This course is identical in content to *History*
(2542) 34-0. It is different in that it is open only to
(2543) Uppers and Seniors who have completed at
least one term of *History* 30 and it may be
elected for a single term.

55—123 Ancient History

- (2551) Four prepared class periods. The course is
(2552) concerned with Greek and Roman history
(2553) from the Minoan Period to the beginning of
the Medieval Period. Each term represents a
coherent and independent unit. In the Fall Term the sur-
vey ends with the world empire of Alexander the Great.
The Winter Term covers the period from the beginning of
Rome until its transition from Republic to Empire. The
Spring Term is concerned with the Roman Empire and
the transition from Roman to Medieval History. (Mr.
Krumpe)

57—1 Victorian England: England in an Age of Expansion

- (2571) Four prepared periods. The course is de-
voted to a study of the major transitions and develop-
ments of nineteenth century Britain. It is divided into
three central components: economic and social develop-
ments; political movements; and international relations.
Since Victorian literature more directly reflects the life
and thought of the times than that of any other period of
English history, the course includes an examination of
those writers whose works were influential in either
adapting or describing the minds and institutions of the
English people to the changing conditions of the period.
These writers include Hardy, Dickens and Marx. (Mr.
Richards, Dr. Strudwick)

ELECTIVES: 60 SEMINARS

These 60-level electives are *seminars* for Seniors. Is-

sue-oriented trimester courses, they meet three hours a week, with an expectation of substantial independent reading and writing. For effective discussion, they are limited to 14 students. **Prerequisite:** either (1) prior completion of the 4-term diploma requirement; or (2) written permission from the department chair. A student may elect a 60-level seminar together with or prior to satisfying the 4th term of the diploma requirement at the 40-level.

SEMINARS IN THE SOCIAL SCIENCES

SS61—3 Issues in Economics

- (2613) **Prerequisite:** Successful completion of *Social*
Science 41. This seminar investigates public
policy issues in the field of economics. Students begin by
studying the history of economic thought, relating it to
our understanding of economic development. After ex-
amining the works of Adam Smith, John Stuart Mill,
Karl Marx, Alfred Marshall, and John Maynard Keynes,
the class addresses a series of current policy questions,
such as the debates over the budget, tax reform, import
restriction, supply-side economics, central economic
planning, labor organization, national industrial policy,
and the ethical responsibilities of business. Classes cen-
ter around discussion of the assigned readings. A term
paper on an issue of choice is required. There is no final
examination. (Dr. Strudwick)

SS62—2 American Race Relations

- (2622) This seminar investigates the development
of racial attitudes in the United States. We
first discuss contemporary campus attitudes and then
examine the extent to which current concerns have
evolved historically, studying the origins of racism in the
British colonies, antebellum slavery in the American
South, antislavery movements and anti-ethnic restric-
tions in the North, and the urban migration of blacks
and the life of Jim Crow in the 20th century. We look
closely at the movement for civil and economic rights
during the 1960s and give substantial attention to recent
issues—how to reconcile assimilation with separation,
Birmingham with Boston, *Brown* with *Bakke*, equality of
opportunity with equality of result. A final paper is ex-
pected; there is no final exam. (Mr. Rogers, Mr.
Williams)

SS64—2 Men, Women and American Culture

- (2642) This seminar is designed to help students
understand the experiences of men and
women in American culture from the Victorian age to
the present. Using interdisciplinary materials from social

and intellectual history, psychology, anthropology, and literature, this course will explore how American culture has defined its ideals of masculinity and femininity since the mid-nineteenth century. We will study a variety of topics: Victorian sexuality; sex roles on the frontier; the "cult of true womanhood"; moral reform in the Progressive Era, manliness and the Strenuous Life, sex roles in the Roaring Twenties; the family and the Great Depression; the return of domesticity in the Fifties; and the pros and cons of the Women's Liberation Movement. The course will include lectures, films, discussion, guest speakers, exams, and several papers. Reading will include Peter G. Filene's *Him/Her Self: Sex Roles in Modern America*; and other books and articles. (Ms. Dalton, Mr. Rotundo)

SS65—2 Nuclear Weapons—Proliferation and Responses
(2652)

This seminar follows the evolution of and reaction to The Bomb—from the discovery in 1938 of fission on Otto Hahn's table in Nazi Germany, to Hiroshima, the Cuban Missile Crisis of 1962, and the START Talks and cruise missiles and President Reagan's "Star Wars" speech in the 1980's. Historians, chemists, physicists, political scientists, and journalists are among those who tell the story, in lectures, documents, and secondary accounts. Readings include Richard Rhodes, *The Making of the Atomic Bomb*; Robert F. Kennedy, *Thirteen Days*; William J. Broad, *Star Warriors*; and Graham T. Allison et al., *Hawks, Doves, and Owls*. The course entails class discussions, field trips, films, readings, a research project and a final exam. (Dr. Quattlebaum)

SEMINARS IN HISTORY

66—2 The Renaissance

(2662)

Three prepared class hours plus one two-hour studio. An interdisciplinary course open to seniors, exploring the history and culture of the European Renaissance. Emphasis will be on the manner in which economic and social developments converged in Italy to stimulate a synthesis of classical and then-modern cultures, a synthesis which took on fresh shape wherever in Europe it rooted itself. In addition to reading and listening assignments in history, music and literature, students will be introduced at appropriate levels of skill to the arts that every educated Renaissance youth was expected to master: perspective drawing, the making of music, and the writing of verse, for example. There will be periodic slide lectures tracing the history of Renaissance painting, sculpture and architecture, and the gathering revolution in scientific thought. All students will complete a 15-page research paper on a topic

of their own choosing. There will be no final exam. (Mrs. Lloyd, Mr. Wilkin, Mr. Bensley, Mr. Lorenzo)

67 A Social History of Families in America
(Not offered in 1988-89.)

68—1 The Courts and Constitutional Development, 1935-1985
(2681)

68—2 This seminar focuses on the often conflicting rights of individuals and society as decided by the courts in the years 1935-85.

What are the legal powers and limits of government to regulate the actions of individuals in the public interest? To what extent may government regulate private businesses relative to working conditions, consumer interests, or the environment? To what extent may the courts act to protect the rights of freedom of speech, press, assembly, and religion; rights against illegal search and seizure; rights of those accused of crimes; and equal rights to vote, education, employment, and housing opportunities regardless of race, religion or sex? The seminar examines the relationships between ethics and social values, political and economic developments, special interest groups, and the development of law. Students analyze the roles of lawyers and judges; legal procedures; the influence of special interests; and the arguments of prosecutors, plaintiffs, and defendants. The readings emphasize the case method by works such as Westin's *The Anatomy of a Constitutional Law Case*; Kutler's *The Supreme Court and the Constitution*; Lyons' *The Supreme Court and Individual Rights in Contemporary Society*; and, especially, Supreme Court decisions. The basic classroom procedure is Socratic dialogue, and the climax of each student's study is the critical analysis of a constitutional law case. (Mr. Lyons)

Mathematics

The mathematics curriculum is built around a core sequence of eight trimester courses: three of elementary algebra, two of geometry, one of intermediate algebra and two of precalculus topics. The completion of these eight trimesters will satisfy diploma requirements, but an additional trimester is required before entering the calculus. Placement of new students in the appropriate first course is made by the department considering the record in previous schools, the results of a self-administered diagnostic test in elementary algebra which is sent to newly admitted students in the Spring, and the course program chosen by the entering student. In general, algebra courses taken before the eighth

grade and geometry courses taken before the ninth grade will not earn placement credit. Examinations to validate first and second year algebra skills are given early in the Fall trimester, at which time students who are incorrectly placed can be shifted to higher or lower level courses.

Students entering with no prior study of algebra start with *Mathematics 10*; those with a partial year of algebra enter *Mathematics 15*. Students entering with a full year of algebra start with *Mathematics 21-1*. If the results of placement testing indicate a need for *Algebra Review*, then students who have not taken geometry start with *Mathematics 19-1* and continue to *Mathematics 21-2*.

New students who have taken one year of elementary algebra and one year of geometry will satisfy diploma requirements by taking *Mathematics 32-1*, *34-2* and *35-3*. Those with a strong background in intermediate algebra may enroll directly in *Mathematics 34-1*. If, on the basis of our testing, the student's algebra skills are weak, then *Mathematics 25-12* may be required before precalculus.

It is generally best to take the College Entrance Examination Board Achievement Test (Level II) in Mathematics near the end of or immediately following *Mathematics 36*.

For students who wish to go beyond the required level, the department offers many electives, some of which lead up to and beyond the Advanced Placement Calculus Examinations of the College Board. The prerequisites of these elective courses should be noted, particularly by students who are involved in Off-Campus Programs.

Hand Calculators

Every student taking Mathematics or Physical Science must have a suitable hand calculator capable of handling square roots, sines, cosines, reciprocals, logarithms and exponents. Any calculator with *sin*, *log* and inverse function keys is adequate for all course use.

COURSES LEADING TO SATISFACTION OF THE DIPLOMA REQUIREMENT:

- 10—0 Elementary Algebra**
(3100) Five prepared class periods. A year-long course for students who have had little or no

algebra. Stress is placed on an understanding of the elementary structure and language of the real number system, on the manipulative skills of simplifying expressions and solving first and second degree equations, and on the study and graphing of polynomial functions. Work is done with word problems, inequalities, irrational numbers, and right triangle trigonometry. **Prerequisite:** None.

- 15—12 Elementary Algebra (T2)** (a two-term commitment)
(3154)

Five prepared class periods. A two-term course for those new students whose knowledge and skills are not strong enough to enter the one-term *Algebra Review* or *Geometry*. **Prerequisite:** A half to a full year of algebra.

- 19—1 Algebra Review**

(3191) Five prepared class periods. A course for students who enter with a full year of algebra whose knowledge and confidence indicate they need a brief review of algebra. **Prerequisite:** A full year of algebra.

- 21—1 Geometry**

(3211) Five prepared class periods. A course for students who have had a strong ninth grade algebra course, but no geometry. This course (3212) is a thorough and systematic presentation of synthetic Euclidean geometry. Strong emphasis is placed on the need for precision

and clarity in the writing of formal proofs. **Prerequisite:** A complete course in elementary algebra comparable in coverage to *Mathematics 10-0*.

- 22—1 Geometry**

(3221) Five prepared class periods. This course continues the work of *Math 21*, with increased emphasis on the algebraic/numerical aspects of geometry. **Prerequisite:** *Mathematics 21*.

- 22—3**
(3223)

- 25—12 Algebra Consolidation (T2)** (a two-term commitment)
(3254)

Five prepared class periods. A course for new students entering Phillips Academy with one year of algebra and one year of geometry, whose algebra skills are not strong enough for placement in *Mathematics 32* or *34*. The course begins with a comprehensive review of elementary algebra, and concludes with topics in intermediate algebra (as listed in the course description of *Mathematics 32*). Students who do satisfactory work in this course enter *Mathematics 34* in the Spring Term of their first year. Students with a (T2) grade of 2 or lower in *Mathematics 25-12* enter *Mathematics 32-3* in the Spring.

31—0 Geometry and Precalculus

(3310) Five prepared class periods. A yearlong course for entering students who have completed an Algebra 2 course but have not studied geometry. The course covers Euclidean geometry (both synthetic and coordinate) and elementary functions (including polynomial, circular, exponential and logarithmic functions). **Prerequisite:** Credit for one year of elementary algebra and one year of intermediate algebra.

32—1 Intermediate Algebra

(3321) Five prepared class periods. Topics in intermediate algebra, including sets; properties of real numbers; factoring; fractions; exponents; radicals; absolute value; inequality; solutions of linear, quadratic, and radical equations. **Prerequisite:** *Mathematics 22*, or its equivalent.

34—1 Precalculus

(3341) Five class periods, four prepared and one unprepared. More topics in intermediate algebra, including absolute value and inequality; slopes and equations of lines; introduction to functions, including linear and quadratic functions; graphing and applications of functions. **Prerequisite:** *Mathematics 32*, or a grade of 3 or higher in *Mathematics 25-12*.

35—1 Precalculus

(3351) Five class periods, four prepared and one unprepared. A continuation of the study of functions, including polynomial, exponential, logarithmic, trigonometric and inverse functions. Completion of this course satisfies the diploma requirement. **Prerequisite:** *Mathematics 34* or its equivalent.

40—12 Elementary Functions (T2) (a two-term commitment)

(3404) Five prepared class periods. A two-term course for entering Seniors whose prior work fails to satisfy diploma requirements. Work focuses on a review of the fundamentals of algebra, and the elementary functions. Students with high quality work in the Fall trimester may satisfy the diploma requirements and take *Mathematics 50-23 (T2)*. **Prerequisite:** Credit for three years of high school mathematics.

36—1 Precalculus

(3361) Five class periods, four prepared and one unprepared. Required of students coming from 35 who plan to study calculus. Topics that bridge the gap between algebra and calculus, including circular and trigonometric functions. In the Fall Term, new Seniors who do poorly on in-class testing may be placed in the first term of 40(T2). **Prerequisite:** *Mathematics 35*, or its equivalent.

Math 37, 38, 41, and 42 are non-calculus electives which may be taken either before beginning a calculus course or as alternatives to the calculus. Of these four courses, *Math 38* (new in 1988-89) is the natural extension of the *Math 34, 35, 36* precalculus sequence, developing earlier work more deeply and strengthening a student's command of algebra and trigonometry. *Math 37, 41 and 42* are courses in non-continuous, discrete mathematics, an area of growing importance which is quite different from the precalculus/calculus sequence.

37—2 Discrete Mathematics

(3372) Four prepared class periods. This course provides exposure to some topics from the areas of discrete mathematics and finite mathematics such as mathematical induction, sequences, series, recursion, and vectors. It also increases mathematical maturity by emphasizing the solution of sustained and demanding problems, thereby strengthening the student's background for studying calculus and other college level mathematics. **Prerequisite:** *Mathematics 36* or its equivalent.

38—1 Analytic Geometry

(3381) Four prepared class periods. This course is an extension of earlier work on lines and curves in the plane. It will include extended locus problems and further study of the conic sections: parabolas, ellipses and hyperbolas and their simple rotations. The course will include an introduction to the algebraic description of 3-space: vectors, curves, planes, simple surfaces and their intersections. **Prerequisite:** *Mathematics 36* or its equivalent.

41—1 Probability

(3411) Four prepared class periods. Includes sample spaces, counting problems, sampling, conditional probability, random variables, expected value, variance, standard deviation, binomial and normal distributions. The computer is used on applications that are too time-consuming to perform by hand and to simulate experiments for which

ELECTIVE COURSES

Only courses with sufficient enrollment will be given.

there is no model. **Prerequisite:** *Mathematics 35* or its equivalent.

42—2 Statistics

(3422) Four prepared class periods. Applications of various distributions, hypothesis testing, statistical inference and data organization. **Prerequisite:** *Mathematics 41*.

50—23 Elementary Calculus (T2) (a two-term commitment)

Four prepared periods. This course, for Seniors only, does not specifically prepare for the Advanced Placement Examination. The approach to calculus is concrete, informal and applied, as opposed to abstract, deductive and theoretical. Topics include applications of the derivative and integral to problems of optimization, curve sketching, rate of change, area, volume, and work. Techniques will be developed to apply derivatives and integrals to logarithmic, exponential, trigonometric and inverse functions. **Prerequisite:** *Mathematics 36* or an equivalent course in trigonometry and elementary functions.

51—1 Elementary Calculus

(3511) Five prepared class periods. For Seniors only. The first of a three term sequence that covers the syllabus for the AB Advanced Placement Examination of the College Entrance Examination Board. Topics covered include: review of functions and graphing, limits and continuity, the derivative and its applications. **Prerequisite:** *Mathematics 36* or its equivalent.

52—23 Elementary Calculus (T2) (a two-term commitment)

Five prepared class periods. For Seniors only. Course finishes the AB Advanced Placement Syllabus. Topics covered include: the definite integral, techniques and applications of integration, and the Fundamental Theorem of the Calculus. **Prerequisite:** *Mathematics 51*.

53—3 Elementary Calculus

(3533) Five prepared class periods. The first of a four-term sequence of courses covering the syllabus of the BC Advanced Placement Examination of the College Entrance Examination Board. Topics covered include limits and continuity, the derivative and its applications, the Chain Rule, related rates, Rolle's Theorem and the Mean Value Theorem. **Prerequisite:** *Mathematics 36* or its equivalent.

54—0 Calculus

(3540) Five prepared class periods. This yearlong course continues the work of *Mathematics 53*

and prepares students for the BC Advanced Placement Examination. Topics covered include theory of the definite integral, techniques and applications of integration, the Fundamental Theorem of Calculus, parametric equations and infinite series. **Prerequisite:** *Mathematics 53* or its equivalent.

55—0 Honors Calculus

(3550) Five prepared class periods. A yearlong course in analytic geometry and calculus which begins only in the Fall. Enrollment is limited to able and committed mathematics students. Satisfactory completion of this course prepares for the College Board BC Advanced Placement Examination. This course may require more than the standard 4 to 5 hours per week of homework. **Prerequisite:** *Mathematics 36* or its equivalent, and departmental permission.

65—0 Calculus of Vector Functions

(3650) Four prepared class periods. For students of demonstrated ability and interest. Vectors and the geometry of 3-space, functions of many variables, partial differentiation, multiple integration, line integrals, Green's Theorem, Stokes' Theorem, linear transformations and matrices. **Prerequisite:** *Mathematics 54, 55* or permission of the instructor.

68—123 Mathematics Seminar

(3681) A course for students who have finished
(3682) *Mathematics 65*. The topics studied will vary
(3683) according to the needs and interests of the students. **Prerequisite:** *Mathematics 65* and permission of the instructor.

COMPUTER COURSES

The Mathematics Department is located in Morse Hall, which also houses two computer labs. One lab has 16 IBM Personal Computers (networked); the second contains 7 Apple IIe microcomputers. A variety of computer courses is offered that range from an introduction to computers to preparation for the Advanced Placement Examinations in Computer Science. Computer languages taught include LOGO and Pascal.

Students who desire an introduction to computer programming but who have little or no computer experience normally enroll in *Computer 20* or *Computer 30*. Those who feel confident about their ability to work independently as they learn to program or who expect to enroll in higher level computer courses should choose *Computer 30*. Those

who desire an overview of computing as they learn to program or feel that they need more interaction with the computer during class should choose *Computer 20*.

- Computer Computer Competence (LOGO)**
 20—1 Four prepared class periods. A one-term
 (3821) course in *programming* in the LOGO lan-
 20—2 guage for students with little or no pre-
 (3822) vious experience with computers. The
 20—3 course focuses on some of the important
 (3823) applications of computers: graphics,
 word processing, and data management.

Topics are introduced with commercial software packages. Then students design and program simplified versions of these packages. Design skills and user-friendly programming are stressed. This course does not qualify a student for *Computer 40* or *50*. **Prerequisite:** None. Not open to students from *Computer 30*.

- Computer Beginning Computer (Pascal)**
 30—1 Four prepared class periods. An introduc-
 (3861) tion to structured programming using the
 30—2 Pascal language. The course introduces
 (3862) programming methodology and its prob-
 30—3 lem solving techniques along with the basic
 (3863) forms of Pascal. Students will learn to
 write programs of moderate length and to
 use the program development system. This course quali-
 fies a student for *Computer 40* or *Computer 50*. **Prerequi-
 site:** *Mathematics 22 (Geometry)*.

- Computer Intermediate Computer (Pascal)**
 40—2 Four prepared class periods. For students
 (3902) with programming experience in Pascal.
 40—3 The course continues the practices and
 (3903) disciplined approach to problem solving
 introduced in *Computer 30*. Various stan-
 dard algorithms such as searching and sorting will be
 introduced. The syllabus will be guided by the course
 description of the A Advanced Placement Examination
 in Computer Science. **Prerequisite:** *Computer 30* or per-
 mission of the department.

- Computer Computer Science**
 50—1 Five prepared class periods. The first
 (3951) term of a yearlong course in algorithms
 and data structures using primarily the
 Pascal language. The emphasis will be on programming
 methodology and some standard algorithms. The cur-
 riculum will be guided by the course description of the
 College Board AB Advanced Placement Examination in
 Computer Science. This course may require more than
 the standard 4 to 5 hours per week of homework. **Pre-
 requisite:** *Computer 30* or permission of the department.

- Computer Computer Science (T2)** (a two-term
 50—23 commitment)
 (3955) Five prepared class periods. Continuation
 of *Computer 50—1*. The emphasis will be
 on data structures and larger programs. This course
 completes the preparation for the AB Advanced Place-
 ment Examination in Computer Science. This course
 may require more than the standard four to five hours
 per week of homework. **Prerequisite:** *Computer 50—1*.

Music

The diploma requirement in Music for entering Juniors and Lower Middlers is one trimester of music, which is satisfied by *The Nature of Music (Music 20 or 21)*. This course is also a prerequisite for courses in the History and Appreciation and the Theory categories, but is not a prerequisite for the Applied category. Entering Upper Middlers must take a trimester course in Music or Art at the Academy: *Music 20* or its equivalent.

Entering Seniors need not take a Music course. Exemption from *Music 20* as a prerequisite is granted on the basis of an exam and/or by permission of the department chairman. However, there is no exemption for the Music diploma requirement.

See also **The Renaissance** (History 66) in the listings of History and the Social Sciences.

APPLIED

- 15—123 Fidelio Society**
 (6151) Pass/Fail. Three prepared periods. Open to
 (6152) all classes. This small group of mixed voices
 (6153) is selected from the *Chorus (Music 17)*. It per-
 forms on numerous occasions throughout
 the year both on *Chorus* programs and on its own. Its
 repertoire includes music of all types, early and modern,
 sacred and secular. Membership is by audition and is
 conditional upon good standing in the *Chorus*. This
 course, if failed, cannot be made up by examination.
- 16—123 Band**
 (6161) Two double periods. Open to all qualified
 (6162) students. Tryouts are held any time before
 (6163) the beginning of a term to test the student's
 ability and to arrange for seating. There are
 some school-owned instruments available for student
 use. All types of music for wind ensemble are rehearsed.

It includes marches as well as classical, popular, and show music. Much sight reading is done, and at least one public concert per term is given. This course, if failed, cannot be made up by examination.

17—123 Chorus

- (6171) Two double periods. Open to all qualified students. The *Chorus* is the Academy's major singing group, comprised of mixed voices, and performs a variety of choral works, both

sacred and secular. No previous choral experience is necessary; just a desire to work hard and enjoy a unique choral experience. This course, if failed, cannot be made up by examination.

18—123 Chamber Orchestra

- (6181) Two double periods. Open to all classes.
- (6182) Most of the music played is for string orchestra; the best winds in the school are invited to join for larger works. While *Chamber Orchestra* may be elected as a credit-bearing course, it is also
- (6183) an activity in which all are invited to participate. This course, if failed, cannot be made up by examination.

19—123 Private Instrument and Vocal Lessons

- (6191) Two class meetings plus required concert attendance. Lessons are available on all orchestral instruments including, in addition, piano (classical or jazz), guitar, saxophone, organ, harpsichord, carillon, and voice.

In addition to practicing daily, the credit students are expected to meet the following commitments: 1) a once per week meeting with their private instructor; 2) a once per week seminar, providing a broader practical/theoretical background; (credit students would be assigned seminar groups according to their instrument and background); 3) a required attendance of three concerts, on campus, per term.

There is a charge of \$220 per term for half-hour instruction, or \$310 per term for full-period (45 minute) lessons, and a nominal fee for use of practice pianos and organs. Orchestral and band instruments are available for rental. **NOTE:** Beginners (as defined by the department) **MUST** take two consecutive terms of *Music 19* if they are enrolled as credit students. This course, if failed, cannot be made up by examination.

20—1 The Nature of Music

- (6201) Five prepared class periods. This course is designed to give a general background in history, theory, and practical aspects of music. Music from its earliest sources to the present is examined. Also, the role of music and the arts in each of its cultural stages is studied. Students receive some first hand experience with

musical instruments. No previous experience in music is required.

21—1 The Nature of Music

- (6211) (for Juniors). This course covers the same material as *Music 20* (see above), but is designed specifically for those Juniors whose verbal and writing skills may be weak. Juniors with no such demonstrated weaknesses may take *Music 20*.
- 21—2
- (6212)
- 21—3
- (6213)

HISTORY AND APPRECIATION

The Nature of Music (Music 20 or 21) is a **prerequisite** for all courses in this Section.

26—23 Seminar in the History of Music

- (6262) Two class meetings. Open to Lower and Upper Middlers and to Seniors. This course, taught in seminar fashion, is one where a great deal of reading, listening, and analysis is expected to take place outside the classroom. The composer or composers and era to be studied each term will be decided by the class and the instructor. (Sample topics: Beethoven and the Era of Revolution; The Life, Times and Music of J.S. Bach.) Hours to be arranged.
- (6263)

27—123 Independent Study in the History and Literature of Music

- (6271) Four prepared class periods. Open to Upper Middlers and Seniors. A student who has taken at least one trimester of *Music 26* may, with the permission of the instructor, pursue an independent course of study in either a particular type of music or a particular period of music.
- (6272)
- (6273)

28—3 Jazz

- (6283) Four prepared class periods. Open to Upper Middlers and Seniors. A study of the history of classic jazz, dating back to its roots in Africa, its development in New Orleans, its spreading to New York and Chicago, and its influence on music today. A survey of ragtime, blues, Dixieland, fox-trot, on through the big band era of the thirties, concluding with the jazz rock of today. A study of the influence and contributions of the major personalities such as W.C. Handy, Jelly Roll Morton, Louis Armstrong, Basie, Whiteman, Gershwin and the rest of the greats.

29—3 Opera

- (6293) Four prepared class periods. A study of perhaps the richest of all musical genres and one which lends itself to discussion and analysis. The course will focus, after a brief survey, on four major op-

eras from different periods: typically Baroque, Classical, Romantic and modern. Study will be made of the text, in translation, if necessary, the composer's style, the special relationship between words and music and the background to a performance. Selection will be based on which operas are being performed in Boston and what is available on film or video.

THEORY

The Nature of Music (Music 20 or 21) is a **prerequisite** for all courses in this section.

32—23 Conducting

(6322) Hours to be arranged. Open to Upper
(6323) Middlers and Seniors. A course in conducting and basic musicianship. This course is designed to give the student an introduction to the conductor's world through developing conducting skills and score analysis.

33—1 Theory of Music I

(6331) Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors. This course offers an introduction to harmonic progression, triads, modes, rhythmic coordination with dictation. Some original work is also expected.

34—2 Theory of Music II

(6342) Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors. **Prerequisite:** *Theory of Music I* or permission of the instructor. This course deals with harmonic progressions, modulations, figure bass, and an introduction to counterpoint and harmonic analysis.

35—3 Theory of Music III

(6353) Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors. **Prerequisite:** *Theory of Music II* or permission of the instructor. This course includes advance figure bass, more complex chords, and a brief introduction to nineteenth and twentieth century techniques.

36—1 Electronic Music

(6361) Four prepared class periods. **Prerequisite:**
36—2 *The Nature of Music (Music 20)* or permission
(6362) of the Department Chairman. A course for
36—3 the benefit of those who seek to expand their
(6363) domains of creativity by understanding and
utilizing the conceptual approaches inherent
in electronic music synthesizers and related equipment.
Using a practical approach, the course begins with the
care and feeding of the tape recorder and proceeds to the

functioning and operation of electronic music modules.
A lab fee of \$15.00 is charged for the use of the
synthesizer.

40—123 Advanced Techniques in Electronic Music

(6401) Four prepared class periods. **Prerequisite:**
(6402) *Electronic Music (Music 36)*. A course de-
(6403) signed for the continuation of the skills and
techniques developed in Music 36. A lab fee
of \$15.00 is charged for the use of the synthesizer.

Philosophy and Religious Studies

The Department seeks to initiate students into three distinctive human quests: the search for meaning, the search for justice and the search for the foundation of knowledge. The process of initiation is intended not only to provide an introduction to outstanding literature in the field but also to assist the student in effecting a personal appropriation of the search and in developing the necessary skills for its pursuit. Active class participation is an essential part of this process. **Hence failed courses usually cannot be made up by examination alone.**

The department diploma requirement is successful completion of any one-trimester course; this requirement applies only to those who attend Phillips Academy for three or four years. Courses are offered at a variety of levels. All courses involve four prepared class periods.

20—3 The Biblical World View: An Introduction

(7203) Four prepared class periods. Open to Juniors and Lower Middlers. Why was the world created? Why are we humans placed on this earth? What are we like? What should we try to achieve in life? How should we treat one another, other creatures, and the planet on which we live? For many centuries the Bible provided for many people a response to such questions. In our day, however, the message has become both unclear and increasingly unfamiliar. In this course we shall look at the composition and the historical setting of the Bible (Old Testament), then read selected passages of Biblical narrative and reflection which introduce persons and principles central to the Biblical view of the world, its inhabitants, and its Creator. (Rabbi Gendler)

21—1 Introduction to Ethics: Discernment and Decision

(7211)
21—2 Four prepared class periods. Open to Juniors
(7212) and Lower Middlers. Beginning with con-

21—3 create moral dilemmas and drawing case studies from literature, bioethics and education, this course provides an introduction to ethical reasoning. Specific attention is paid to the thinking of one classical philosopher (Socrates) and one modern utilitarian (Peter Singer). (Dr. Avery)

23—1 The New Testament Perspective
(7231) Four prepared class periods. Open to Juniors and Lower Middlers. The course will consider, in their cultural and historical context, the person and teaching of Jesus of Nazareth, the development of the early Christian community and the religious claims of that community concerning the Christ. (Fr. Gross)

24—2 Religious Discoverers
(7242) Four prepared class periods. Open to Juniors and Lower Middlers. The experiences of a handful of individuals have exerted an extraordinary influence on the life of the world. These individuals can be called religious discoverers, each of whom has forged a vision of how life should be lived, that persons, communities and whole cultures have found compelling for a thousand years or more. We will examine three such discoverers: Jesus, Moses and Buddha. We will study how their lives have provided exemplary models for living for the religious traditions they represent. (Ms. McCaslin)

30—1 Introduction to Non-Western Religions
(7301) Four prepared class periods. Open to Lower and Upper Middlers and Seniors. This course provides a brief introduction to four of the world's major religions: Islam, Hinduism, Buddhism, and Taoism. Huston Smith's classic, *The Religions of Man*, is the text. Additional readings are drawn from basic religious texts of the traditions. (Ms. McCaslin and Rabbi Gendler)

32—2 Post-Biblical Jewish Thought: Responses to the Holocaust
(7322) Four prepared class periods. Open to Lower and Upper Middlers and Seniors. An exploration of the holocaust through diaries, memoirs, works of fiction, poetry, and later reflections on the phenomenon.

Questions to be dealt with will include: what was it like for the victims? What was it like for the Nazis? How could it have happened? What elements from Jewish, Christian and secular tradition contributed to its possibility? What have been some of its effects on our own feelings about life and human beings? How have various Jewish, Christian, and secular thinkers responded to the challenge of this event? (Rabbi Gendler)

33—1 Varieties of Religious Experience
(7331) Four prepared class periods. Open to Lower

33—3 and Upper Middlers and to Seniors. A critical examination of some of the most universal and enduring forms of religious experience: ecstasy, myth-making, ritual expression and the disciplines of meditation and prayer. Concepts and models of understanding are introduced as useful tools with which to approach the phenomenon of religion. (Ms. McCaslin)

36—1 Proof and Persuasion
(7361) Four prepared class periods. Open to Lower and Upper Middlers and Seniors. A practical introduction to informal logic and to the philosophical study of language. Some of the questions raised are: What is the difference between a good argument and a poor one? What are the common fallacies of thought? What are the limitations of logic? What is the meaning of "meaning" and the truth about "truth"? The course stresses the development of individual skill in argument and includes a critical examination of the patterns of thought one encounters every day in magazines, newspapers and on television. (Mr. Hodgson)

41—1 Views of Human Nature
(7411) Four prepared class periods. Open to Upper Middlers and Seniors, and to Lower Middlers with permission of the instructor. A critical examination of selected traditional and contemporary views of human nature with the following questions in mind: Do we have a characteristic nature? What are our basic needs, purposes, rights, obligations and values? To what extent are our actions determined by heredity and instinct? Are we free? Are we responsible for our actions? Do the answers to any of these questions differ for males and females? Given an understanding of human nature, how should we structure society to satisfy our needs and take advantage of our potential? Class discussions and written exercises are designed to encourage participants to develop views of their own against a background of a basic understanding of the readings. These include selections from the *Bible*, selections from the works of Plato, *On Aggression* by Konrad Lorenz, *Walden Two* by B.F. Skinner and *The Politics of Experience* by R.D. Laing. (Mr. Hodgson)

43—1 Law and Morality
(7431) Four prepared class periods. Open to Upper Middlers and Seniors, and to Lower Middlers with permission of the Instructor.
43—3 A critical examination of issues that arise out of the relationship between law and morality. Questions of concern include: For what reasons, if any, should an individual obey or disobey the laws of society? Which kinds of governments (monar-

chy, aristocracy, democracy, etc.), if any, are legitimate? To what degree should society restrict the freedom of individuals through laws on matters like abortion, pornography, race and sexual relations? Class discussions and written exercises are designed to encourage participants to develop views of their own against a background of basic understanding of the readings. These include selections from the works of Plato, Hobbes, Rawls and Martin Luther King, Jr. (Mr. Hodgson)

44—2 Nonviolence in Theory and Practice

(7442) Four prepared class periods. Open to Upper Middlers and Seniors. The militarily most destructive century in human history, our twentieth century, has also been one in which such men as Gandhi and Martin Luther King, Jr., have successfully applied nonviolence to conflict situations. What is the theory of this approach to human conflict? What are some of its psychological assumptions? What is its religious and human significance? By what means does it operate? What are its prospects for the age ahead? We shall use case histories, the testimonies of those directly involved in such struggles, films, critical and theoretical studies in trying to clarify and comprehend some of these elements of nonviolence. Readings include Joan Bondurant's *The Conquest of Violence* as well as writings of Gandhi and King. (Rabbi Gendler)

45—2 In Search of Meaning

(7452) Four prepared class periods. Open to all Upper Middlers and Seniors and to Lower Middlers with permission of Instructor. The reflective person is confronted with questions that hunger to be answered yet elude definitive, "objective" answers. The person's faith is often what sustains him/her and provides "subjective" answers to these fundamental questions. The issues of creation, of death, of evil, of identity, of purpose all challenge one's faith. This course (which takes its title from Victor Frankel's book) will consider these issues from a faith perspective using Scripture, literature (i.e. *Equus*, *No Exit*, *The Little Prince*, *The Shadowbox*, *Man's Search for Meaning*, *I Heard the Owl Call My Name*, etc.) and other materials. (Fr. Gross)

46—1 Bioethics: Medicine (formerly RelPhil 42)

(7461) Four prepared class periods. Open to Upper Middlers and Seniors. Is a physician's confidentiality absolute? When can we experiment on human beings? How should we treat defective newborns? Should the government be telling doctors what they may and may not do? What about the Hippocratic Oath? Who should set the ethical standards for medicine? What is ethics anyway? Considering these and other questions, through case studies,

discussion and readings, this course provides a brief introduction to moral philosophy, its application to issues in medicine and medical research and its role in setting public policy. (Dr. Avery)

47—3 Bioethics: The Environment (formerly RelPhil 42—3)

Four prepared class periods. Open to Upper Middlers and Seniors. Do only humans have rights? Do animals count? Should trees have standing? What is the value of wilderness or a salt marsh? Have we any obligations to rivers and mountains and birds of the air? Considering these and other questions, through case studies, discussion and readings, this course provides a brief introduction to moral philosophy, its application to environmental issues and its role in setting public policy. (Dr. Avery)

50—2 Existentialism

(7502) Four prepared class periods. Open to Upper Middlers and Seniors. The term "existentialism" covers a broad range of attitudes and values that are joined together by an emphasis on human existence. The authors brought together in its name share a characteristic concern for the problems of meaning, identity and choice that confront men and women in everyday life. The lectures, discussions and readings are designed to help us locate and express these problems as they confront each of us in our own lives and to assist in understanding and resolving them by drawing on the experiences and insights of the major existentialist thinkers. Readings: Nikos Kazantzakis, *Zorba the Greek*; Friedrich Nietzsche, *Thus Spake Zarathustra*; Jean-Paul Sartre, *No Exit and Being and Nothingness*; Soren Kierkegaard, *The Sickness unto Death*; Martin Buber, *I and Thou*. (Mr. Hodgson)

51—1 In Search of Justice: from Socrates to Marx

(7511) Four prepared class periods. Open to Upper Middlers and Seniors. Who or what decides if my behaviour is just? God, nature, the powerful, society, my emotions, the economic system? What is justice anyway? Or is the whole question a logical mistake?

Through reading and discussion the course encourages participants to develop their own views on these issues in dialogue with Plato, Aristotle, Bentham, Mill, Marx and others, so that they will be better equipped to make their own contribution to the never ending search for justice. (Dr. Avery)

52—3 Great Philosophers

(7523) The great philosophers challenge us to address difficult and fascinating questions that perennially face mankind: What is the good life? What

are the sources of human experience? Is there anything we can know with certainty? Does God exist? What is the relationship between my mind and my body? This course critically evaluates the responses of Plato, Descartes, Hume and Whitehead. (Mr. Hodgson)

Physical Education

All Juniors and new Lowers are required to elect one trimester of *P.E. 10* in addition to their regular athletic commitment.

10—1 Physical Education

(9201) Pass/Fail. Limit of 15 students per section.

10—2 Five class periods per week. A course integrating health and fitness concepts with self-

testing and challenge activities; two class

10—3 periods per week are spent using the running track, weight room, ropes course and

other areas of the athletic complex. Two class periods are devoted to drown-proofing survival swim technique and C.P.R. training. One period per week is lecture-discussion, requiring some outside reading or other preparation. If the course is failed, the student will repeat it, in full or in part, during a subsequent term. Students should not enroll in this course unless they are able to swim.

Psychology

The Psychology Department offers a variety of elective courses which examine fundamental concepts in the field. Particular emphasis is placed on helping the student explore the interface between psychological knowledge and personal growth. This is accomplished by utilizing teaching strategies which integrate formal academic work with frequent opportunities for student participation and self-exploration. The introductory level courses offer an overview of the fundamental ideas and classic experiments in psychology and consider the complexity of social development. The advanced level courses examine how individuals behave in groups and how healthy relationships are formed and maintained.

32—1 Introductory Psychology

(7021) One double period and two prepared class

32—2 periods; for Uppers and Seniors. A survey

(7022) course designed to introduce the student to

32—3 the complexity and diversity of psychological inquiry. Emphasis is placed on the application of basic psychological principles to individual experience in order to expand awareness of both self and others. In addition, the broader implications of psychological findings for an integrated understanding of human development and behavior are considered. Topics to be covered may include: psychoanalytic, behavioral and humanistic theories of the person, psychosocial, cognitive, moral and early childhood development, human motivation and personality, abnormal behavior and research techniques in psychology. Lectures are designed to catalyze discussion. A combination of objective examinations and individualized writing assignments are utilized to evaluate the student's learning.

33—3 **Developmental Psychology**
(7033) One double period and two prepared class periods: for Uppers and Seniors. An examination of human growth and development from infancy through adulthood. The role of early experiences and biological factors in later formation of personality, intellectual and motivational behaviors will be considered. Different theoretical perspectives (psychodynamic, social learning and biological) of psychological development will be examined as they relate to developmental milestones. Among the theorists to be studied are Piaget, Erikson, Freud, Gilligan, Bandura, and Vaillant. The format of the course includes readings, films, quizzes, and a term paper.

40—2 Human Relations

(7102) Pass/Fail. One double period and one prepared class period; for Uppers and Seniors.

40—3 The many dimensions of human relationships are explored. Emphasis is placed on assisting the student to articulate his or her emerging psychological awareness of personal and social relationships. Primary source readings and structured experiential exercises are used to develop an understanding of psychological concepts as rooted in individual experience. Topics to be considered include: core human conflicts, characteristics of the healthy individual in relationship to others, how family experiences and communication styles can shape relationships. In addition the format of this course includes: active class participation, written assignments and a final term paper. This course, if failed, cannot be made up by examination.

40—2 Human Relations

(7102) Pass/Fail. One double period and one prepared class period; for Uppers and Seniors.

40—3 The many dimensions of human relationships are explored. Emphasis is placed on

assisting the student to articulate his or her emerging psychological awareness of personal and social relationships. Primary source readings and structured experiential exercises are used to develop an understanding of psychological concepts as rooted in individual experience. Topics to be considered include: core human conflicts, characteristics of the healthy individual in relationship to others, how family experiences and communication styles can shape relationships. In addition the format of this course includes: active class participation, written assignments and a final term paper. This course, if failed, cannot be made up by examination.

Science

The diploma requirement in science for members

of the classes 1989 and 1990 is one yearlong course in either biology, chemistry, or physics. However, all students are strongly urged to study in each of these three areas. The order in which biology, chemistry, and physics is taken will have to vary with a student's degree of mathematical sophistication, previous science courses, and interest. Distribution among these sciences may be attained by yearlong courses or term-contained electives. Each department also offers advanced courses for students who wish to add depth to their science studies.

For members of the class of 1991 and for all students entering as of, and subsequent to, September 1988, the requirement is a yearlong course and three additional terms of science. At least one of those terms must be in the biological sciences if the yearlong course were chemistry or physics and, conversely, at least one of the term-contained courses must be in physics or chemistry if the yearlong course were in biology. With the exception of yearlong laboratory courses, one term-contained science course taken as a Junior will count toward the diploma requirement. Two yearlong courses will, of course, fill the requirement as long as one of the courses is in biology and the other is in either chemistry or physics.

For those students entering as Juniors, we suggest that: 1) those Juniors who have already experienced success in a junior high science course consider taking *Chemistry 25*, *Biology 30*, or *Physics 20*, subject to approval by the appropriate department chair; 2) those Juniors who have little science background and who need to develop basic skills should take *Physics 10* or *Chemistry 11*; 3) those Juniors who find themselves more interested in studying science in the context of a particular topic should take *Biology 14*, *15*, *17*; or *Physics 18*.

Biology

The Biology department offers a number of term-contained courses primarily for Juniors, each of which explores a particular topic through classroom and laboratory or field work. Juniors who wish to enroll in *Biology 25* or *Biology 30* MUST obtain permission from the department chairperson.

13—3 Introduction to Ornithology

(8033) Three prepared class periods and one (double) unprepared laboratory period. The course will cover many of the various orders of Class Aves, concentrating primarily on the songbirds and waterfowl of Eastern Massachusetts. Anatomy, physiology, and behavioral aspects of the winged world will be supplemented by laboratory field trips to many of the dynamic bird habitats in the immediate area. The course will culminate with a trip to Parker River National Wildlife Refuge (Plum Island) in Newburyport, Massachusetts, an environment rich in migratory and nesting birds.

15—1 Oceanography

(8051) Four prepared class periods. The 70% of our earth's surface comprising the oceans is examined from a number of biological, physical and chemical perspectives. Accordingly, we investigate the origin of the oceans and interactions among the thousands of living organisms found in or near the sea. Films and slides complement the classroom portion of the course. Special emphasis is given to the biology of sharks and whales.

17—2 Introduction to Zoology

(8072) Four prepared classes per week, one of which will be used for laboratory work. This is a one-term course designed for Juniors and Lower who have not taken *Biology 25* or *30* or their equivalent. A study will be made of the similarities and differences among the major animal divisions from the most primitive invertebrates to the most complex vertebrates. Areas of concentration will include the basic systems of each phylum (*i.e.*, digestion and reproduction), as well as the ecological role and the evolutionary development of the organism. Lab periods will be used to develop techniques of dissection while studying the anatomy of animals from selected phyla.

The Biology department offers two yearlong introductory level courses, each of which satisfies the diploma requirement for a laboratory science. Juniors who wish to enroll in *Biology 25* or *Biology 30* MUST obtain permission from the Department Chairperson.

A student entering Phillips Academy as a Lower, Upper, or Senior who wishes to receive Biology credit on the strength of a course taken in the 9th grade at another school may do so upon passing a validation test to be administered after the student arrives at Andover.

25—0 Introduction to Biology

(8120) Three prepared class periods and one double laboratory period each week. This course is intended primarily for Lower Middlers with little previous exposure to science. A topics approach usually centered around laboratory experiences is employed in order to acquaint students not only with fundamental biological principles but also with the methods and techniques used to elucidate them. Attention is paid to the processes by which scientific evidence is gathered, interpreted, and summarized. Part of the Spring Term is set aside for work on individual or small group laboratory research projects. (This course is not open to Seniors.)

30—0 Biology

(8130) Three prepared class periods and one double laboratory period each week. This is a survey course for those students with previous exposure to some of the basic principles of science. It stresses the unity of life, rather than the diversity, by emphasizing the functions common to all living things. It covers, in plants, animals, and microorganisms, the fundamental principles of metabolism (including nutrition, gas exchange, materials transport, excretion, and homeostasis), responsiveness and coordination, reproduction and development, genetics, evolution and ecology. Part of the Spring Term is set aside for work on individual or small group laboratory research projects.

31—2 Human Biology

(8142) Five prepared class periods, of which at least one will be in the laboratory, each week. This one-term survey course is for Uppers and Seniors who have not had *Biology 25* or *30* or previous credit in Biology. It stresses the principles of human physiology including: nerve and muscle function, nutrition, gas exchange, material transport, the immune system, excretion, homeostasis, and human reproduction and development. The course will also expose students to recent developments in molecular genetics and their relation to human physiology.

Since the breadth and depth of coverage are similar to that in the Winter Term of *Biology 30*, students who take *Biology 31* will not be able to take *Biology 25* or *30* subsequently. *Biology 31* may be taken for one term only.

36—1 Human Ecology

(8161) Three class periods and one double field or laboratory period each week. For Uppers
36—3
 (8163) and Seniors who have completed a yearlong science course. This course will examine ecosystems, energy flow and populations, and will take an interdisciplinary approach to problems of societal concern such as pollution, population growth, environmen-

tal ethics, and food supply. A project or short paper will be required.

47—1 Animal Behavior

(8241) Three class periods and one double laboratory period. The course is designed to familiarize the student with the basic principles of animal social behavior. The topics which receive the greatest emphasis are: territoriality, altruism, mating strategies, courtship, parental behavior, migration, dominance, and the evolution of behavior patterns. Throughout the course, an effort is made to relate the behavior of animals to the behavior of humans. A project or a research paper will be required.

Students who plan to take the Advanced Placement examination in Biology should see the Department Chair early in their Lower year. Because of recent changes in the approach of the AP exam, we have chosen not to offer a course specifically directed at Advanced Placement. Students who are particularly interested in Biology are encouraged to take *Biology 30* as Juniors or Lower, followed by a year of Chemistry and a year of Physics, and then to take those advanced Biology courses which interest them. 50-level courses are open to Uppers and Seniors who have had *Biology 30* or its equivalent, whether or not they plan to take the AP exam.

51—1 Evolution and Ecology

(8251) **Prerequisite:** *Biology 30* or the equivalent.
51—3
 (8253) Three class periods and one double field or laboratory period each week. Evolution is a major unifying theme in biology, and the mechanism of natural selection serves as a foundation for examining ecosystems, energy flow, succession, and relationships between populations. Problems of societal concern such as pollution, population growth, environmental ethics, and food supply will be discussed. A short library research paper will be required. This course may require more than the standard 4 to 5 hours of homework per week.

53—2 Molecular Biology

(8262) **Prerequisite:** *Biology 30* and one term of chemistry or permission of the instructor. Three prepared classes and one double laboratory period per week. Following a brief review of chemical principles, the course examines the major classes of biomolecules and how they are synthesized and degraded in the cell. Particular emphasis is placed on those reactions which are associated with energy conversion pathways

such as respiration and photosynthesis. Enzyme function is considered both in terms of mechanisms of action and with regard to kinetics. The relationship between structure and function at the molecular level is emphasized in studies of molecular genetics and the control of genetic expression. This course may require more than the standard 4 to 5 hours of homework per week.

54—1 Human Physiology

(8271) **Prerequisite:** *Biology 30* or the equivalent.

54—2 Five prepared classes per week. An in-depth consideration of some of the major systems

of the human body, this course offers an opportunity to learn how to read and study from a challenging college level text; the

reading is dense, the terminology must be selectively appreciated, and the regulatory mechanisms discussed are complex. Lab work may include the dissection of a cat or appropriate experiments. A short library research paper will be assigned. This course may require more than the standard 4 to 5 hours of homework per week.

60—3 Biology-Chemistry

(8283) This is a course in LABORATORY RESEARCH. Open to Seniors and Uppers. Permission of the Department Chair is required. **Prerequisite:** one year of biology and one year of chemistry. Meets three double periods a week.

Depending upon their background, students will do lab work in biology, chemistry, or biochemistry. They will start with more prescriptive labs such as are found in lab manuals, but in greater depth, asking questions, modifying, elaborating, and repeating. They may then limit themselves to one area, turning their exploring into a focused research project. All students will be taught a core of standard laboratory techniques which they may use in their research project, or that they will encounter in a professional lab. Finally, students may use this course as a springboard for a Westinghouse project, which would be accomplished either at a professional lab during the following summer, or finished at Andover as an Independent Project during the subsequent spring term. Reading articles in scientific journals as appropriate would be part of a student's research; as well, students would be asked to keep a lab journal and to write a final paper.

Chemistry

11—2 Elements and Compounds

(8312) Open to Juniors and Lower Middlers. Five

11—3 class periods per week. This course is designed for students who have no background in chemistry. Topics such as elements, compounds, bonding, chemical reactions, acids and bases, the mole concept, and elementary organic chemistry are introduced. Emphasis is placed on developing familiarity with common substances and reactions, and on the use of symbols and elementary mathematics to describe them. There is frequent laboratory work.

25—0 Introduction to Chemistry

(8420) **Prerequisite:** Completion of *Mathematics 10* or the equivalent. For Lower Middlers, Upper Middlers and Juniors with permission of the Department Chair, who have NOT completed their Phillips Academy mathematics requirement. Five class periods per week. An introduction to the chemical view of the material world, including atomic theory, atomic structure, chemical reactions, the nature of solids, liquids, gases, and solutions, acid-base theories, electrochemistry, and the chemistry of the organic compounds. Making connections between chemical principles and everyday life will be emphasized. One or two class periods per week will be devoted to laboratory work.

30—0 Chemistry

(8430) **Prerequisite:** Completion of *Mathematics 22* or the equivalent. Three class periods and one double laboratory period per week. This course is an introduction to the theoretical framework of modern chemistry, including atomic structure, chemical bonding, phase changes, solutions, chemical reactions, thermodynamics, kinetics, general equilibria, acid-base equilibria, electrochemistry, and aspects of inorganic and organic chemistry. These topics are treated with greater depth than in *Chemistry 25*. Emphasis is placed on developing problem solving skills and understanding the experimental basis of theories.

31—1 Short Introduction to Chemistry

(8441) Open to Seniors who have not had a year of chemistry. Three class periods and one double laboratory period per week. This course surveys the basic principles of chemistry, such as elements and compounds, periodic table, atomic structure, bonding, general reactions, acid-base chemistry, and simple chemical arithmetic.

34—1 Geology

(8451) Four prepared class periods, with two periods used each week for laboratory work. A general introduction to physical geology, to include crystal growth, minerals, measurement of geologic time by

radioactivity and fossils, volcanoes, seismology and earth structure, deformation of strata, faults, plate tectonics. Some attention to disasters of geological origin, e.g. earthquakes, tidal waves, eruptions.

36—3 Chemistry of the Environment

(8463) Four prepared class periods. Open to Seniors and Uppers. Lowerers must have the permission of the instructor. This course is concerned with the effect of chemistry on the citizenry. Current issues—such as acid rain, chemical safety, waste disposal, and air and water pollution—are discussed. Chemical theories and principles are introduced as needed. Laboratory work and periodical readings are integral components.

44—2 Chemistry of Nutrition

(8522) **Prerequisite:** One year of biology, chemistry, or physics. Four prepared periods per week.
(8523) This course will study carbohydrates, fats, proteins, vitamins, and minerals, with respect to their chemical structure role in the human body, and occurrence in food. As well, the connection between diet and disease will be examined. What is the nature of the relationship between fat and cancer, and fat and heart disease? What is the data underlying the fiber hypothesis, the possible protective role of vitamin A, and the claims for vitamin C? Other topics such as sports nutrition, energy balance, and food additives will also be addressed. A short research paper on some topic of interest will be required.

47—3 Organic Chemistry

(8543) **Prerequisite:** Completion of either *Chemistry 25* or *30*. Three recitation periods, and one double laboratory period. Students interested in medical or biological fields or in additional chemistry must generally wait until the college sophomore year before studying organic chemistry, the chemistry of carbon compounds. This course is a prior introduction to this critically important and fascinating subject.

Organic chemistry is largely non-mathematical and descriptive in nature. Students will use a condensed "minicourse" text, learn many of the laboratory techniques unique to organic chemistry, make use of three-dimensional plastic molecular models, and gain a sound background in nomenclature, functional groups, bonding, simple mechanisms, typical reactions, and infra-red spectra.

52—12 Advanced Placement Chemistry (T2) (a two-term commitment)

Prerequisite: *Chemistry 25* or *Chemistry 30* completed with distinction. Four recitation periods and

one double laboratory period. This is a rigorous course which treats the topics addressed in Introductory Chemistry in greater depth. It also prepares students who wish to take the Advanced Placement Examination in chemistry. This course may require more than the standard 4 to 5 hours per week of homework.

55—0 Honors Chemistry—Advanced Placement

(8570) **Prerequisite:** One year of physics. Three periods for recitation and two double laboratory periods. This course is open to a limited number of able students, by invitation, who have strong scholastic records in mathematics and physics. No prior course in chemistry is expected. It is essentially the equivalent of a first-year college course, and prepares students for the Advanced Placement Examination in Chemistry. This course may require more than the standard 4 to 5 hours per week of homework.

60—3 Biology—Chemistry

(8283) This is a course in LABORATORY RESEARCH. Open to Seniors and Uppers. Permission of the Department Chair is required. **Prerequisite:** One year of biology and one year of chemistry. Meets three double periods a week.

Depending upon their background, students will do lab work in biology, chemistry, or biochemistry. They will start with more prescriptive labs such as are found in lab manuals, but in greater depth, asking questions, modifying, elaborating, and repeating. They may then limit themselves to one area, turning their exploring into a focused research project. All students will be taught a core of standard laboratory techniques which they may use in their research project, or that they will encounter in a professional lab. Finally, students may use this course as a springboard for a Westinghouse project, which would be accomplished either at a professional lab during the following summer, or finished at Andover as an Independent Project during the subsequent spring term. Reading articles in scientific journals as appropriate would be part of a student's research; as well, students would be asked to keep a lab journal and to write a final paper.

Physics

10—1 Introductory Physical Science

(8601) Five class periods. Open to Juniors with limited backgrounds in science. The course will deal with some of the basic concepts of physics by means of classroom work, problem solving, and laboratory experiments.

18—3 Introduction to Observational Astronomy

(8683) Four prepared class periods, with one period each week used for observation. This course

is intended for Juniors and Lowers who want to become familiar with the universe in which we live. Topics include a survey of the sky, lunar observation, the origin of the solar system, celestial distances and motions, and a brief introduction to stellar evolution. Students identify constellations, track planets, and learn how to observe using a telescope.

20—0 Physics Honors for Juniors

(8700) Four prepared class periods. Co-requisite: Registration in *Math 19* or *Math 21*. This is an

honors course for talented Juniors with a strong interest and background in science and mathematics. Students entering this course should have *mastered* a year of algebra as it is used profusely in solving word problems. There is laboratory work.

25—0 Introduction to Physics

(8720) Five class periods, one unprepared. Open primarily to Lower Middlers. An introductory course in the basic concepts of physics. A less rigorous course than *Physics 30*, it is designed for students with latent mathematical maturity. Students should have completed one year of algebra before enrolling. Coverage includes mechanics, heat, waves, electricity, magnetism, relativity, atoms, and the nucleus.

30—0 Physics, A Survey

(8730) Five class periods. **Co-requisite:** registration in at least *Mathematics 32* or its equivalent. A non-calculus physics course, including a study of classical mechanics, wave motion, heat, kinetic molecular theory, relativity, geometrical and physical optics, and atomic and nuclear physics. Laboratory work is an integral part of the course. Text at the level of *College Physics*, by Sears, et al.

31—1 Observational Astronomy

(8741) Four prepared class periods, with one period used for observation each week. This course is designed for Uppers and Seniors. Observational astronomy, the study of our solar system and beyond, introduces the most recent developments in planetary and stellar science. Topics such as our sun, the nine planets, comets, meteors, red giants, white dwarfs, supernovae, black holes, celestial mechanics and NASA's space program will be supplemented with laboratory work, movies and one or two nights a week of required telescope use. Students will have the opportunity to do individual projects of their choice, such as astrophotography. Not open to students who have had *Physics 18*.

32—1 Classical Mechanics

(8751) This course covers the same material as the first trimester of *Physics 30-0*.

33—3 Electronics

(8763) Four class periods per week. **Prerequisite:** previous completion of or concurrent enrollment in a Physics course and enrollment in at least *Math 34*. A course in modern solid state linear and digital electronics through consideration of circuit elements and their combinations, operational amplifiers, various types of diodes and transistors, integrated circuits, and their uses. There will be considerable laboratory work.

34—2 Cosmology

(8772) Four prepared class periods. This course is open to Uppers and Seniors. Cosmology is the study of the universe as a whole, and its evolution. Topics include galactic structure and large organization in the universe, modern theoretical models, physical evidence, the standard model of the Big Bang, galactic evolution, the search for extra-terrestrial life, and the future of the universe. Telescope observation, movies, guest lectures and a field trip augment the course.

52—12 Advanced Placement Physics (T2) (a two-term commitment)

(8854) Five class periods. **Prerequisite:** An honor grade in *Physics 30* or its equivalent and enrollment in at least *Math 54* or its equivalent. This is a rigorous course in mechanics (Fall term) and electro-statics and dynamics (Winter term). Calculus will be used as required. This course prepares candidates for the C-level Advanced Placement Examination in Physics and entrance to honor level programs in physics at the university level.

55—0 Honors Physics—Advanced Placement

(8870) Five prepared class periods. Open to talented students who will be enrolled in at least *Math 54*, may have taken a chemistry course and need not have taken any previous physics. If you are interested in this course, you may sign up for it with your academic advisor in the spring or you may request it on your course registration form. The department chairperson will then review your credentials and invite you to join the course or suggest you enroll in *Physics 30*. *Physics 55* prepares students for the C-level Advanced Placement Examination and is a rigorous course emphasizing mechanics and electro-statics and dynamics. This course may require more than the standard 4 to 5 hours of homework per week.

60—3 Relativity and Quantum Mechanics

(8893) **Prerequisites:** Enrollment in at least *Physics 30* and *Math 54*. Four prepared class periods.

Relativity and Quantum Mechanics are two theories that completely revolutionized man's thinking about the universe. The course is a survey of the basic ideas underlying these theories. Special mathematical techniques needed for a better understanding of the material are developed in the course.

Study Skills

(9502) Basic Study Skills

(9503) Four class periods. This course is designed to help students build effective study skills through understanding more about the learning process. Class discussion focuses on the problems of motivation, concentration and retention. Exercises are designed to work on improvement in each of those areas and to develop proficiency in planning study time, in developing accurate yet flexible reading comprehension, in taking notes and marking books, and in preparing for exams. This course may be taken for at most one term.

(9521) Language Skills I

(9522) Four class periods. This course is designed
(9523) for those students who need supplementary help in overcoming weaknesses in writing, spelling and vocabulary. Specific assignments are planned to meet the needs of each student. Permission of the instructor required.

(9533) Language Skills II

Four class periods. Seniors and Uppers who need help in writing essays and research papers may elect this course for the Spring Term only. Organizational skills, paragraph and sentence structure, and theme development will be reviewed, depending on students' individual needs. Students must have permission of the instructor.

(9541) English as a Second Language

Four class periods. This course is for those International students who need to improve their English proficiency. Specific assignments are designed to strengthen listening comprehension, conversational fluency, and writing skills in a second language. One English credit is earned for the course.

(9601) Typing

(9603) This course in personal typing is open to all students; it is designed for beginners to learn the keyboard and basic typing skills. There is no charge, but students must supply their own typewriters.

This course does not earn academic credit. (Mrs. DiClemente)

Theatre and Dance

All courses are electives, open to the various classes as noted. Courses in theatre are designed for students who wish formal exploration of the elements of stage work and a supplement to (or substitute for) extracurricular work in productions. A variety of experiences is available: some courses result in performance; some courses study theory; some do both. Theatre students are encouraged, though not required, to supplement their class work by participating in any of the numerous productions mounted each year, or they might be invited to join the Andover Touring Company, which has produced and toured with *Our Town*, *The Fantasticks*, *Scenes from American Life*, *A Thurber Carnival*, *Godspell*, *The Contrast*, *J.B.*, and *The Skin of Our Teeth*.

THEATRE COURSES

21—1 Introduction to Acting

(6511) Four class periods and one hour of movement. Open to all classes. This course is designed for students with little or no acting experience. The emphasis is on the variety of acting experiences rather than on a polished final product. One required trip to a nearby theatre.

22—1 Public Speaking

(6521) Four class periods. Not open to Juniors. The course has a dual objective: to learn how to speak easily in front of others, and to learn how to speak English well. Students give prepared and extemporaneous speeches on a variety of topics while studying diction, pronunciation, projection, organization, and other techniques of good speaking.

26—13 Technical Theatre

(6561) Two double periods. Open to all classes.
(6563) Through practical experience in designing, building, and lighting for plays currently being produced, students learn the elements of stagecraft, including set construction, stage rigging, and the use of

lighting instruments and gels. For the Fall Trimester emphasis will be on stagecraft; for the Spring, lighting.

32—2 Intermediate Acting

(6622) Four class periods. **Prerequisite:** *Theatre 21*,

32—3 or departmental permission. Building upon the principles of acting introduced in *Theatre 21*, this intermediate acting course consists

of detailed scene work and improvisation, exploring the relationship of the actor to his audience and to his fellow actors and focusing on the creation of dramatic moments, both with and without scripts. The course considers various acting styles, in an effort to guide the actor toward a greater understanding of his responsibility on stage: to see to what degree he can remove himself from himself while creating truthful characterizations.

51—1 Acting and Directing Workshop

(6711) Two double periods. **Prerequisite:** *Theatre 21* or 32, or departmental permission. Uppers and Seniors only. The course serves two kinds of students: those who wish as actors to study plays and characters in greater depth and those who wish to study the principles and techniques of directing, the most complex of theatrical tasks. While everyone will do some acting, only those people who express a desire to experiment with directing will do so. Class members work with manageable scenes from classical and contemporary periods, reading theories of acting and directing, studying various performance styles, and examining methods of scene interpretation.

52—123 Play Production

(6721) Four double periods. By audition. This course is oriented toward the performance of a significant work by an important playwright. Recent choices have been *The Sea*

Gull, *The Little Foxes*, *Macbeth*, *As You Like It*, *The Hostage*, *Hamlet*, and *Ten Little Indians*. The total time requirements for this course (classtime plus homework) may exceed the standard 9 hours per week.

53—2 Playwriting

(6732) Four class periods. Open to Uppers and Seniors. Each student is expected to write at least one one-act play in addition to certain exercises in monologue, dialogue, and scene setting. The class reads aloud from students' work-in-progress while studying the formal elements in plays by important playwrights and by reading selected literary criticism focused on drama.

DANCE

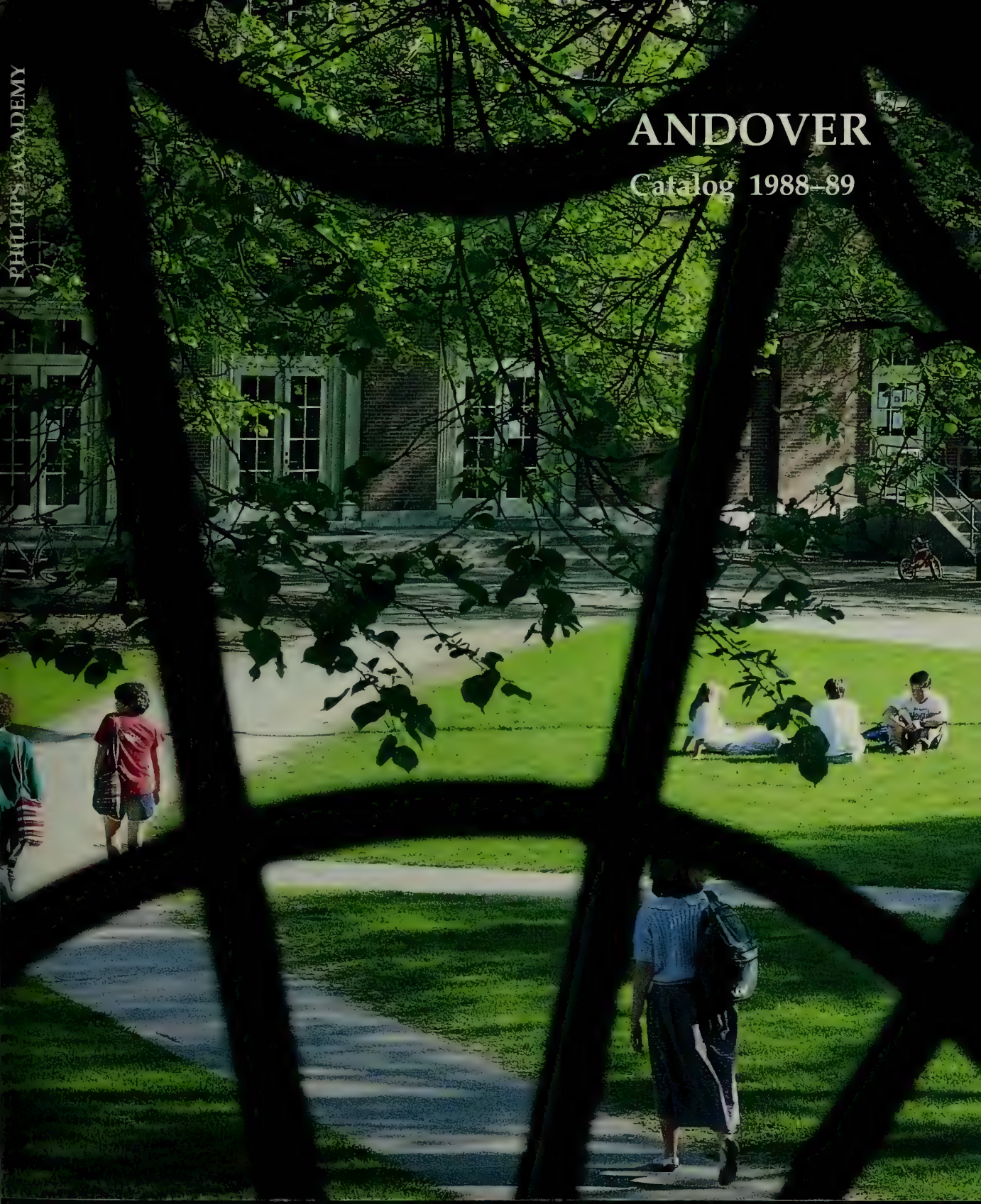
25—123 Introduction to Dance

(6801) Four prepared class periods. Open to all classes. A formal course in movement and composition which introduces the serious student to the vocabulary and other elements of dance through active participation. The emphasis is not ultimately on public performance, but on the process and the discipline of modern dance. (Ms. Brecher)

Phillips Academy
Andover, Massachusetts 01810

ANDOVER

Catalog 1988-89



The material in this catalog is intended to provide general information concerning Phillips Academy, Andover, rather than a complete record of any one year. It is not in any manner contractually binding, and the information herein is subject to revision and change.

Andover

Catalog



Published by Phillips Academy Andover, Massachusetts 01810



Phillips Academy,
Andover, Massachusetts,
better known as Andover,
is an independent,
coeducational, integrated
and non-sectarian
institution offering a
variety of academic
programs for high school
students.

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Introduction to Andover



Phillips Academy in 1778

In 1789 the first scholarship monies are recorded, from John Phillips, "in consideration of further promoting the virtuous and pious education of Youth, (poor children of genius and of serious disposition especially) in Phillips Academy, founded in Andover, Massachusetts." Today, approximately 34% of the student body benefits from financial aid in the form of outright grants or loans; Andover has been able to implement an aid-blind admission policy for the last two years, ensuring a broad diversity within the student body.

When Lu Jianghong arrived on the Andover campus, she entered an unfamiliar world. She had traveled for two days to attend a school which she had never seen. A twelfth grade student, she had never before ventured beyond her home province of Manchuria in the People's Republic of China. She and her parents, professors at the Harbin Institute of Technology, were anxious to have her experience the West, and obtain a type of education unavailable at home. She applied to a special exchange program between the Institute and Andover, and was one of three top students accepted to travel to the United States to study at Phillips Academy for one year.

Jianghong was not alone in finding Andover very different from her home. She and her two classmates from Harbin became part of a student body of over 1200 young men and women, either returning to school or beginning a new chapter in their educations. They joined students from Guatemala, New York, and Lawrence, Massachusetts, who all found themselves a little scared, and very excited.

Jianghong was undoubtedly aware of the eclectic mix of her peers at her new school. What she may not have known was that in encouraging her to consider Andover, the Academy was fulfilling a mission which is well over two hundred years old. Since 1778, when Samuel Phillips, a gunpowder manufacturer for General Washington's army founded an academy to be "ever equally open to youth, of requisite qualifications, from every quarter," Andover's goal has been to gather young people from a broad range of experiences and provide them with the tools for a life of leadership and service.

The school Jianghong attends is very different from that of her Andover predecessors in the 18th century: the first class consisted of thirteen pupils from surrounding villages meeting in a rough shed. Today students come from over 28 countries and virtually all of the 50 states and territories to a campus of over 500 acres, where extraordinary modern facilities mix with school buildings more than one-hundred-fifty years old. Andover today enjoys two heritages: in 1973 Phillips Academy merged with neighboring Abbot Academy (est. 1829), one of the nation's oldest and most distinguished schools for young women. Now, part of the Abbot campus makes up one of six

clusters—residential “schools within a school” of approximately 200 students each, designed to provide a smaller, more intimate social community within the larger context of the whole school.

Jianghong came to Andover on a full scholarship. “Youth from every quarter” still means not only talented young people from a variety of geographic, racial and religious backgrounds, but also students from a wide range of economic situations. This year, as in the past, Andover was able to admit all new students without reference to their ability to pay the tuition. Through a strong program of grants and loans, awarded according to need, Andover may invite students exclusively on the basis of talent. Students who come to Andover bring to this campus not only academic ability, but also artistic, athletic, and creative strength. Over two thousand young people gather at Andover every year: in addition to the twelve hundred who attend the traditional school term for periods of up to four years, some eight hundred more spend the summer with us in the Andover Summer Session or various programs and institutes under its umbrella.

Andover is a residential school offering a twenty-four-hour learning experience. Young people in this community learn almost as much from peers as from teachers, particularly in a setting where there is no disjuncture between classroom and the outside, between school and home. Teachers at Andover are strong personalities, talented individuals of energy and well-considered values—instructors who work in the classroom, on the playing field, and in the dormitory. They approach students as whole people with real opinions, struggles, joys and concerns. The faculty in this community not only teach scholarship, they live it. An English teacher may be a professional photographer, a house counselor may use his evenings to finish his second off-Broadway play, and a field hockey coach may also be a highly regarded biology research scientist. Like the students, Andover teachers bring to this school a broad range of talent to offer the community.

Students come to Andover at a particularly significant time in their lives. What we expect from them is much like what Eliphalet Pearson expected from his students in 1778: a willingness to share their experience, to use their talents, and to be open to consideration of new ideas. Whether from Bangkok or Boston, young people must have the resources to establish their own success, refine their goals and visions of the future and build the courage to lead in a world where communications have made the world more accessible and international issues more acute. One of the reasons that Andover sought a formal exchange with the People's Republic of China is our commitment to creating a community in which

people from different cultures can develop a common understanding; where young people at a critical time of decision-making can learn firsthand, through programs Andover offers, about what it is like to live in Senegal or work in Washington, D.C.

When Jianghong leaves Andover she will enter an American university. Wherever she goes, she will carry with her a set of experiences unique to having studied at Andover. For her, and for all young people who join our community, we want that experience to have been a challenging, constructive and joyful time in their lives.



Headmaster Donald W. McNemar



Andover Life

A Beginning



In 1782 Paul Revere was commissioned to make the Phillips Academy seal. Revere engraved the educational faith of Andover's founders—"The end depends upon the beginning"—around the symbols of the rising sun and the hive of industrious bees. The founders' religious and patriotic commitment to the common good is symbolized by the second motto, "*Non Sibi*"—"not for one's self."

If you come to Andover today, you will not have to go far to see a building designed by Charles Bulfinch or named for Nathan Hale. You might take computer graphics in a modern arts and communications center, discuss African history in an archaeology museum, or study the War of 1812 in a building constructed before it took place. Your roommate might be from Brazil or Tennessee. You might learn how to play squash, how to be a DJ in a radio station or how to run rapids in a kayak. In any case, you will be expected to make the most of who you are. Andover students benefit from a careful combination of independence and support. There are no formal study halls; there are no "lights out." You alone are responsible for what you accomplish, but there are many people who will help you. Teachers in a residential setting are close by, either to chat or to review the math problem you did not understand in class. Professional study counselors stand ready to help you manage your time and give you advice on how to polish the term paper due next week. Your house counselor will be there to encourage you on your cycling, or teach you how he or she mastered irregular French verbs. The opportunities and support are here for students who demonstrate a strong sense of responsibility and independence.



The Abbot Bazaar, begun in May of 1920 at Abbot Academy to celebrate the original opening of the school, continues today as an annual outdoor carnival and rite of spring for Andover students. The Bazaar includes a dunking booth (traditionally occupied by the Headmaster), facepainting, tag sales, and picnicking.



The Place

The school is located on a hilltop in the town of Andover, a 35-minute bus ride from Boston and Cambridge. It is well situated for easy access not only to the historical, cultural and entertainment offerings of the Greater Boston area, but to the beaches and mountains for which northern New England is justly renowned.

Phillips Academy was the first boarding school to be incorporated in the United States (1780). During its more than two centuries the school has grown in size from a single rude building and a few acres of land to an extended campus of 160 buildings on over 500 acres.

A Purpose

This revised version of the Statement of Purpose, voted by the faculty in the spring of 1988, reaffirms the Academy's goals set forth in the Constitution of 1778.

Phillips Academy is a residential high school that seeks students of character and intelligence from diverse ethnic, racial, socioeconomic and geographic backgrounds.

The Academy's scholastic program is designed to foster excellence in all disciplines associated with the liberal arts tradition. Faculty members guide students to master skills, to acquire knowledge, and to think critically, creatively, and independently. The school strives to help young people achieve their potential not only in intellectual understanding, but also in aesthetic sensitivity, physical well-being, athletic prowess, and moral decisiveness so that they may lead productive, responsible lives.

Committed to discovering authentic sources of community, the Academy strives to understand and respect the differences that arise in a multi-cultural setting. Academic and residential programs encourage sensitivity to issues of gender, race, and social class. The school's residential structure fosters close association between faculty and students for personal, social, and intellectual development.

Andover's 1778 Constitution charges the Academy to prepare "youth from every quarter" to understand that "goodness without knowledge is weak and feeble; yet knowledge without goodness is dangerous." This obligation challenges students in mind, body, and spirit to see beyond themselves and to go beyond the familiar; to remain committed to developing what is finest in themselves and others, for others and themselves.



The People

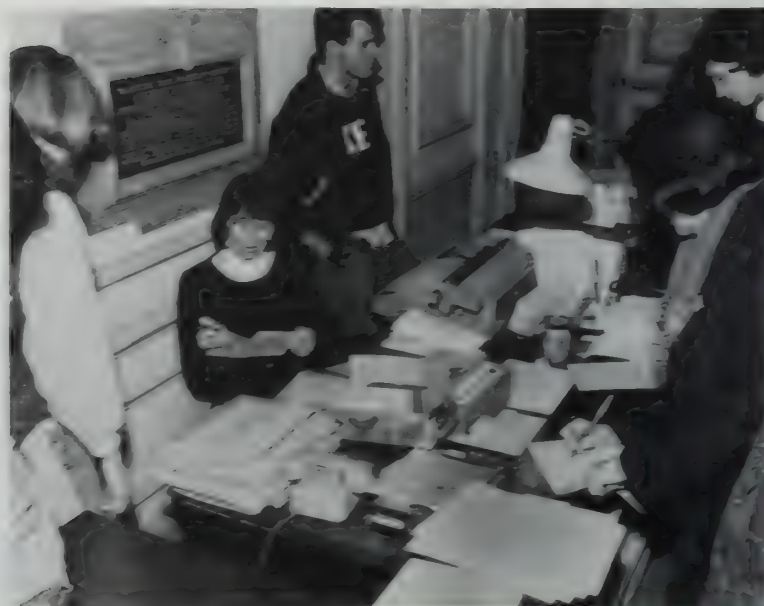
Students

There are approximately twelve hundred young men (54%) and women (46%) in Andover's regular session, of whom about one-fifth are day students. More than eight hundred others attend the various programs and institutes of the Academy's Summer Session.

Andover students are divided into four classes: Seniors, Upper Middlers, Lower Middlers and Juniors—our traditional terms for 12th, 11th, 10th and 9th graders. Some are here for four years, most for a shorter time, but they all have two things in common: intelligence and the willingness to use it.

Faculty

The faculty number approximately two hundred; two-thirds hold advanced degrees at the master's or doctorate level. Andover teachers teach not only in the classroom, but on the field, in the dormitory, and through numerous extracurricular clubs and activities as well. They demand as much of themselves as of their students: among a myriad of responsibilities to the school, the faculty find time to be authors, research scientists, photographers, prize-winning poets, theological scholars, and professional musicians.



The Work

If you come to Andover, you have the ability to accomplish all that is expected of you academically, but come prepared to work hard. For every hour spent in class, students here are expected to complete approximately one hour to an hour-and-a-quarter of preparation. Students at Andover must complete a required core of studies which the faculty feels is essential to a liberal education. This includes three years of language; a yearlong science course, plus three additional terms of science; three years of mathematics; a year of United States history with a required additional term of elective history; a term each of music, visual studies, religion, philosophy and physical education; three years of English. Requirements for a diploma vary according to the level at which a student enters the curriculum, and are described fully in the *Andover Course of Study*. Beyond this framework, students choose their own courses with the guidance of an academic advisor. The school encourages all students to construct a curriculum which reflects breadth, depth and balance, and to take advantage of the hundreds of elective courses available.

A year, a week, a day

Andover operates on a trimester system, offering about 285 separate courses that vary in length from one trimester to the full year. The year begins in late September and ends in mid-June, with breaks at Thanksgiving, Christmas and in the early spring.

Classes are held on Monday, Tuesday, Thursday, and Friday, the full class days, and on Wednesday morning and every other Saturday morning.

Wednesdays and Saturdays are half study days with no afternoon academic appointments. On alternate Saturdays there usually are no morning classes and Sunday is totally free. This flexible weekly schedule provides time for independent study, for special projects, for informal as well as regularly scheduled sports, shopping in Andover, or occasional trips to Boston. Social events during the week are limited by the demands of the academic program, but the weekend program on campus includes dances, concerts, movies, plays and informal activities.

Participation in athletics is required of all students, and athletics and activities are scheduled four afternoons a week for two hours each. On Wednesday and Saturday afternoons, varsity and junior varsity teams participate in interscholastic competition.

Meals are served in Commons, our fifty-year-old central dining hall, composed of four handsome, traditional dining halls and four completely modern serving areas. The cost of meals is included in the fees of both boarding and day students.

The Daily Schedule

7:15 a.m.	Commons opens for breakfast
8:00 a.m.	Classes begin. Six 45-minute periods per day
9:45 a.m.–	
10:15 a.m.	Conference Period
11:00 a.m.–	
1:30 p.m.	Lunch available at Commons
2:10 p.m.	End of last class
2:40 p.m.–	
4:40 p.m.	Sports
5:00 p.m.–	
6:30 p.m.	Supper available at Commons

Students normally have four or five class meetings per day.

Most students are eligible to take a day excuse each week and, after the first two weeks of the year, overnight excuses beginning after their last scheduled weekly appointment.

Course work is intensive and involves about twenty-five hours of outside preparation each week. Required athletics or afternoon activities total approximately six hours each week. In addition, all students are required to participate in the school's work program, performing assigned tasks, supervision or leadership responsibilities two hours each week. Despite the amount of time that must be spent on academic pursuits, most students become very involved in extracurricular activities and social events. The school encourages independence and personal responsibility: there are study hours but no study halls, and decisions about the use of one's time are largely left to the judgment of the individual.



Residential Life



On any given weekend, social events on campus could include at least one dance, a movie, coffeehouse or concert, and a theatre production in the Drama Lab. The Del Fuegos (above), called by *Rolling Stone* magazine one of its "New Artists of the Year" in 1985, performed at Andover recently. They are Woody Geissmann, Tom Lloyd '79, Dan Zanes '79, and Warren Zanes '83.

Dorms and Clusters

Boarding students live in dormitories with faculty house counselors and their families. Although these buildings vary in size and house from four to twenty-four students, all are small enough to encourage close relationships among students and between students and house counselor. One-third of the students live in single rooms; two-thirds in large double rooms. Juniors are housed together in special dorms. Other larger dorms are likely to have students from at least three classes.

For many students, dormitory life is one of the most valuable aspects of their time at Andover. Whether it's planning a pancake breakfast or studying for a history mid-term, sharing it with people from very different backgrounds or from foreign lands is a rewarding learning experience.

Dormitories are grouped into six geographical units called "clusters," each including girls' and boys' dorms, about two hundred students from all classes, and twenty to thirty faculty families. Clusters create the personal atmosphere of a small community in which everyone knows everyone else and people do most or many things together. The cluster system is the heart of Andover's residential life, bringing the advantages of a small school to an institution that already has the advantages of size.



The clusters have considerable autonomy; teachers and students together manage their own affairs under the leadership and supervision of a cluster dean, who works closely with the dean of residence. Each cluster has its own academic counseling, student officers, discipline system, intramural athletics and informal social activities.

A faculty member is responsible for administering the student work program, which is designed not only to develop a sense of community responsibility for the daily operation of the school, but also to help the school reduce its operating costs. Working two periods a week, all students share the jobs of cleaning the dormitories, returning books to library stacks, serving as office helpers and laboratory assistants, and performing other essential tasks. In addition, all residents of a given dormitory are responsible for keeping its entries free of litter, snow and ice.

The clusters take turns each week working in the dining hall, seniors serving as overseers. Seniors have many other supervisory roles, including cluster and school offices, editorial boards of student publications, club leadership, and other assignments serving the Phillips Academy community.

Counseling and Discipline

Those who are not accustomed to a residential school may at first be surprised by the degree of independence an Andover student is given. Along with that freedom come rules and procedures necessary to protect the rights of individuals and to enable the school to achieve its ends. Existing rules have a dual purpose: to preserve the necessary order in the community so that effective learning can take place, and to teach students that individual freedom can be achieved only through due consideration for others. Incoming students and their parents are provided with a copy of the Academy *Blue Book*, summarizing rules and regulations; all students are held responsible for its contents.

The resident house counselor is the faculty member most directly responsible for the students in a dormitory, working with them on both a personal and academic level. Parents can expect to hear from the counselor at regular intervals and are encouraged to turn to this faculty member for information about a student's progress.

Each cluster dean supplements the work of the house counselor and is available to students and parents for information and advice. Other support staff include academic advisors, who help students in the cluster plan their academic pro-

grams, and the College Counseling Office, which assists all seniors with their future educational plans.

Graham House Counseling Center serves the community in several ways. The staff offers psychological counseling, study counseling, study skills courses, student tutorial services, the Psychology Department curriculum, consultation to faculty and staff, and specialized workshops in response to residential needs.

Discipline is handled at the cluster level and involves the cluster dean, house counselor, other faculty and student representatives. Offenses involving a student's integrity, social offenses that threaten the well-being of other individuals or the school community, and continued infractions that indicate an unwillingness to come to terms with the demands of the school—all render a student liable to dismissal. Cluster recommendations for suspension or dismissal are made to the headmaster, who makes the final decision. Examples are dishonesty, the possession or use of alcoholic beverages or illegal drugs, and unauthorized absence from school bounds. Students may not possess, rent or drive any motor vehicle within school bounds; bicycles are permitted.

Minority Counseling

Minority Counseling provides support services for black and Latino students at Phillips Academy. The office is located in Phillips Hall on Main Street, which serves as an Afro-Latino Cultural Center and Heritage Library. The center is open to the entire Phillips Academy community. The center is also the meeting location for the Afro-Latino-American Society board meetings. It is available to other groups for meetings and small study groups. Counseling services, of a non-therapeutic nature, are provided on an ongoing basis for any student who wishes these services.

Minority Counseling sponsors programs and workshops for the school. The programs assist students in adjusting to Phillips Academy's rigorous schedule, celebrate the diversity that is present on our campus, and strive to eliminate racism.

In a community such as Andover, all must commit themselves to the goals of the community and to loyalty to each



Young Josiah Quincy, in 1778, didn't look forward to the prospect of eight long hours in the recitation room: "The truth was, I was an incorrigible lover of sports of every kind. My heart was in ball and marbles." He went on to become congressman, mayor of Boston and president of Harvard.



other. Since education at Phillips Academy is both intellectual and humane, students and faculty derive mutual support from sharing of themselves and their ideals.

Trust and responsibility have many interpretations; these words have become hackneyed from overuse and misunderstanding. But the ideas they embody—sensitivity to others, willingness to explore and respect differing points of view, charity and humility in expressing judgment, readiness to cherish friendship, to depend and to be depended upon—are nonetheless fundamental. Such values can scarcely be legislated and can only be imperfectly defined. Yet the health and happiness of everyone in the community depend on consideration and awareness, restraint and candor, discretion and shared joy. Collaboration toward these imprecise but worthwhile ends is an expectation which all at the Academy hold.

Only those who feel that they can live happily with the rules and guidelines of Phillips Academy should apply for admission.



Harriet Beecher Stowe, author of *Uncle Tom's Cabin*, and her husband, a Seminary professor, lived in Stowe House. She is buried in the school cemetery. Mrs. Stowe, who shocked the strict Congregationalist community by giving parties and entertainments for students, was suspected of going to the theater and even of having "Episcopalian leanings." Claude M. Fuess, *An Old New England School*

The Campus Ministry

Reflective of a diverse student body, the religious ministry at Phillips Academy is also diverse. Priest, minister, and rabbi serve the ongoing liturgical and celebrative needs of the Roman Catholic, Protestant, and Jewish students on campus; the chaplains also teach, counsel, and help organize a variety of community service and social action projects for the entire campus. To meet the needs of students from other spiritual traditions, opportunities are provided for reflection, meditation, and fellowship in a variety of settings.

Community Service Program

The Community Service Program provides opportunities for students to volunteer time in service to the community in Andover and in the nearby city of Lawrence. Volunteers may participate during free time or in place of a sport. Among the many volunteer opportunities are, tutoring children from culturally and ethnically diverse backgrounds to strengthen their learning skills; assisting teachers in their work with physically handicapped and developmentally retarded children; working with children from 3 months to 5-years-old in the Andover Community Child Care Center on campus; the Big Brother and Big Sister program in Lawrence; The Academy Manor Nursing Home in Andover.

The program's primary goal is that participants learn a deeper appreciation of themselves and their potential, and to achieve personal growth in the service of others fulfilling the mandate of the academy's motto, *Non Sibi*, not for self.

Activities

Extracurricular activities are an important aspect of a student's education, and Andover offers a rich fare, thanks to the diversity of interests in the student body. From the Chess Club to the Computer Club, it seems that all Andover students do something special in their free time. The Tour Guide Association handles the responsibility of conducting campus tours for the Admission Office, and older students who are members of the Tutorial Program offer help to fellow students in academic difficulty. The student radio station, WPAA (91.7 FM), is on the air from 6:30 a.m. to 11:30 p.m. daily, serving the local listening area as well as the student body. *The Phillipian*, the Academy's prize-winning, student-run weekly newspaper, is wholly

uncensored; students lay out the paper and do their own typesetting, as well as write the articles and headlines. The *Pot Pourri*, the school yearbook, and the school literary magazine, *The Mirror* (Robert Frost was an early contributor), provide more opportunities for those with a literary bent.

Cultural organizations include the Afro-Latino-American Society, the Asian Cultural Society and others; course-related groups range from the Astronomy Club to the German Club. The Chapel Fellowship, the Newman Club and the Jewish Student Union support the ecumenical ministry in providing active religious communities for Andover students.

At any time during the week, actors and directors will be working on a main stage play or on a student production in the Drama Lab; the Andover Political Economy Club may be listening to a State Department official discuss the Middle East; the Natural History Club may be bird watching on an ocean beach or—if the season is right—the Ski Club may be on its way to the White Mountains of New Hampshire.

Many students make extensive use of school facilities in their free time, whether or not they are affiliated with a club or organization. The Arts Center is a major focus of school life—darkrooms are used almost around the clock, and students and faculty interested in painting, metal sculpture, ceramics or design make use of the center's studios and workshops in their free time. The Music Department also provides facilities for students interested in pursuing music beyond the classroom.

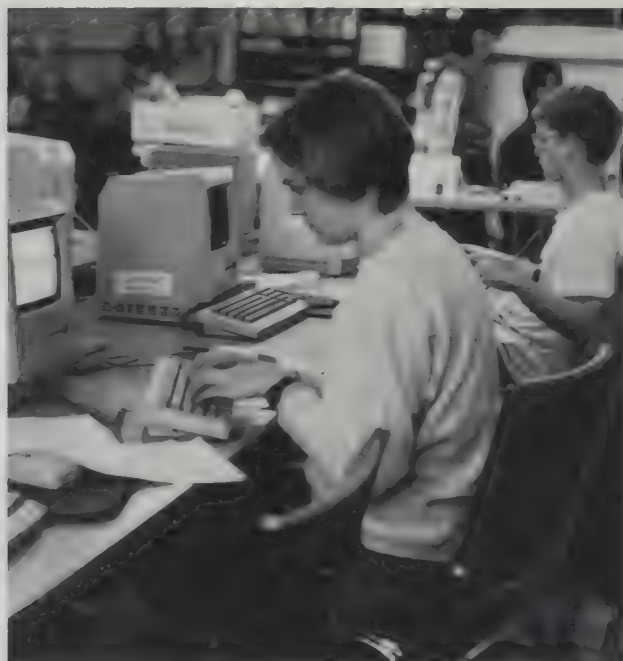
There is no limit to the variety of extracurricular activities at Andover. Students who do not find an existing club or organization that meets their needs are encouraged to start one.

Organizations (Clubs)

Afro-Latino-American Society
All That Jazz (vocal jazz group)
Amateur Radio Club/W1SW
Andover Forum (current events publication)
Asian Society
Astronomy Club
Blue Key Society
Bridge Club
Cercle Francais
Chapel Fellowship
Chess Club
Chorus
Community Service
Computer Club
Dance Club
Equestrian Club

8 'n 1 Club (singing group)
Fidelio Society (madrigal singing society)
German Club
The Heartland Coalition
Jewish Student Union
Just Ordinary Komediens Everywhere
The Leaky Pen (satire club, with publication)
The Mirror (literary magazine)
Model United Nations Club
Mohgul Society (Indian Society)
Natural History Club
Newman Club
Nuclear Awareness/Education Club

The Phillipian (student newspaper)
Philomathean Society (debating society)
The Photography Club
Political Economy Club
Pot Pourri (yearbook)
Press Club
Scuba Club
Ski Club
Strategic Gamers Guild
Tertulia (Spanish club)
WPAA (student radio station)



Educational Resources

The Oliver Wendell Holmes Library

At the center of Andover's intellectual life is the newly restored Oliver Wendell Holmes Library, named after the famous doctor and poet who was a member of the class of 1825. The building, which consists of the original 1930 structure of 30,000 square feet and an addition of 30,000 square feet completed in 1988, contains the academy's main library collection of 100,000 volumes. The stacks are open to students. In addition to academic work, students and teachers use the library collections to explore new fields of interest and to read casually.

The library subscribes to over 260 American and foreign periodicals and daily papers from cities throughout the country. A microfilm file of *The New York Times* is available. Particular library treasures are the Jansson Atlas, printed in Amsterdam in 1657, papers and books of Oliver Wendell Holmes, and one of the world's leading collections of Vergiliana.

The facility also houses the academy's Computer Center, a day student locker area, faculty research carrels, faculty reading room, and a number of classrooms and seminar rooms. The building, which is open to students 80 hours per week, provides both contemporary and traditional settings and a variety of study and lounge seating.

Computer Center

A computer center, located in the lower level of the Oliver Wendell Holmes Library, is available for student use. It houses two computer classrooms and a third lab filled with an array of Macintosh, Apple IIe and Zenith (IBM compatible) computers, Imagewriter, Laserwriter, and various other letter quality printers. A wide range of software is available, and instruction in computer usage is provided. The center is open during the regular operating hours of the library.

The Addison Gallery

The Addison Gallery of American Art operates both as a museum in the traditional sense and as an art center for the school and the community. In addition to organizing exhibits of American art from the collection, the museum staff originates exhibits of contemporary painting, sculpture, photography, video, film and crafts. The museum has pioneered the uses of new media in its programs beginning with video in 1965 and most recently with the utilization of interactive video discs both as exhibition components and for an electronic catalog of The Addison's holdings. Seminars bring artists in close contact with students to discuss contemporary art issues. In cooperation with Phillips Academy's Music Department, concerts by faculty and students are produced in the museum.

The holdings of the museum are recognized as a distinguished specialized collection: Allston, Copley, Morse, Stuart, West and others represent the Colonial period. Of special importance among the many paintings of the nineteenth century are examples by Cole, Doughty, Eakins, Homer, Inness, LeFarge, Ryder, Twachtman and Whistler. The early part of the present century is shown in the work of Bellows, Davies, Demuth, Hassam, Hopper, Luks, Marin, Prendergast and Sloan. Contemporary artists are represented by works of Calder, Lippold, Moholy-Nagy, Hofmann, O'Keeffe, Pollack, Shahn, Wyeth and others.



Sidney Smith, class of 1985, as the President of the Afro-Latino-American Society on campus helped to found NEALSA, the New England Afro-Latino Student Alliance, an organization to promote communication and interaction among students of color at independent schools. NEALSA continues today with many social events among member schools and an annual conference.



The Robert S. Peabody Archaeology Museum

The Robert S. Peabody Foundation for Archaeology has conducted major archaeology research in this hemisphere for the last seventy-five years and has published many reports of its scientific investigations. The Foundation maintains a museum which cares for many famous collections based on some of the most important archaeological expeditions undertaken in the Americas. The laboratories of the museum are used in teaching and illustrating the Foundation's research. Mature students may undertake special study projects which involve the use of the Foundation's collections and library resources.

The Cochran Sanctuary

The Moncrieff Cochran Sanctuary is a sixty-five-acre tract of rare beauty located so close to the center of school activity that it is in fact an extension of the campus. Landscaped areas planted with dogwood, azalea, rhododendron and laurel provide a succession of bloom that draws many visitors from late April to mid-June. A brook and two ponds attract nesting ducks and geese, and extensive natural wild areas, varied in terrain and plant life, provide nesting places for many species of land birds. Cross-country runners and skiers make extensive use of the Sanctuary, as does the Academy's Search and Rescue program.





The Academic Departments

The Curriculum

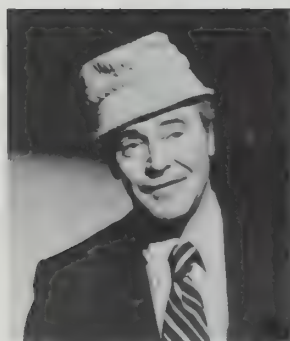
The curriculum of Phillips Academy contains both a required core of studies believed to be fundamental to a liberal education and elective courses designed to fit the special needs and interests of the individual student. Instruction is given in all subjects required for entrance to higher institutions, whether liberal arts or technical. All departments offer courses beyond the level of preparation for college.

Classroom groups are small enough to permit individual attention; the average class size is fourteen. Students are placed in sections fitted to their attainment and, through accelerated sequences and advanced courses, are encouraged to progress at a rate commensurate with their ability and ambition. Many students fulfill requirements ahead of the normal year, increasing their choice of college-level courses and other elective opportunities. Andover's trimester system provides flexibility and variety in the curriculum and allows various combinations of independent work and off-campus projects.

Every student is assigned an academic advisor who, over the span of the student's career at Andover, joins the student in planning an educationally sound program of studies; a program which is both broad and rigorous, and which takes into account the student's strengths and interests, as well as diploma requirements and college aspirations.

The curriculum and diploma requirements are described in detail in the *Course of Study*, which will be sent upon request to each preliminary applicant and to others who would like to receive it.

THE ARTS



During his second and third years at Andover, Jack Lemmon's grades were suffering due to his overpreoccupation with theatrics and composing. Though things looked very bleak in his senior year, he applied himself diligently and made what he thought was an astounding reversal. Against all odds he was able to graduate. When Headmaster Claude Fuess handed the proud young Lemmon his diploma, he said, "A remarkable change. I'm truly impressed, Bill."

Visual Arts

At the heart of the art program is a concern that all students learn to see freshly and accurately, that they learn how to organize their efforts to make something happen, that they develop a critical eye for the coherence of their environment, all these with an independent mind.

The diploma requirement in art is as follows: Juniors and new Lower Middlers must take a trimester course in studio art; an entering Upper Middler must take a trimester course in studio art or music. Andover attempts to balance structured, problem-solving courses like the basic Visual Studies, with more adventurous advanced courses, organized around longer-term projects. For a student who desires several terms in art or design, the courses are here, whether the student's objective is a professional school, Advanced Placement in a liberal arts college, or simply a strong basis in a traditional area of general education.

The superb facilities of the Arts and Communications Center—fully equipped wood and metal shops, two complete photo labs, print-making equipment, painting and drawing studios, a kinetics studio, computer graphics labs, video studio—are supplemented by the several kilns available to ceramicists. The department welcomes extracurricular use as well as work related to courses, and faculty members are on hand every evening to encourage the idea that whether it's painting or computer graphics, the Arts Center is the place to go.

Theatre and Dance

Courses in theatre are designed for students who seek formal exploration of the elements of stage work and a supplement to (or substitute for) extracurricular work on plays. A variety of experience is available; some courses are performance oriented; some are theory oriented; some are both. All combine classroom and workshop sessions; students work out practical theatrical problems together under the guidance of an instructor. Drama, as well as dance, both modern and ballet, may be elected as an alternative to athletics, once a year.



George Washington Hall, capable of handling audiences of one thousand, includes a flexible, professionally equipped proscenium stage. It has a full fly system, accommodation for numerous lighting instruments and an elevator/pit. Recent main stage productions have included *Richard III*, *Taming of the Shrew*, *The Dining Room*, *Hamlet*.

The Drama Lab, also in George Washington Hall, is a "black box"—an intricate arena/workshop with excellent lighting facilities, suitable for audiences of not more than seventy-five. Although main stage plays are usually directed by a member of the faculty, the Drama Lab allows students to direct plays themselves and to experiment with dramatic styles. A sample of productions from recent years includes plays by Albee, Ionesco, and Pinter but original student work is also performed here.

Theatre students are encouraged—but not required—to supplement their classwork by participating in any of the numerous productions mounted each year.



Music

The Music Department faculty consists of five full-time and several part-time instructors. Other highly qualified instrumentalists are available to teach voice, piano, organ, classical guitar, brass, percussion, strings, and woodwinds.

Andover offers courses for the beginner as well as for intermediate and advanced students both at the applied level (study of musical instruments or playing in a musical organization) and in the history, appreciation, and theory of music.

The Nature of Music, or Music 20, is the diploma requirement in music, and a prerequisite for most courses in the history, appreciation, and theory sections. A more advanced three-part course, Theory of Music, runs in sequence throughout the year.

Graves Hall, the department's newly renovated home, has large rehearsal halls for concerts as well as many individual practice and ensemble rooms, music classrooms, teaching studios and an electronic music studio. Graves Hall also houses

the Timken Recital Hall where faculty, guest, and student recitals take place. The Department also has a large, up-to-date record library and listening room.

The Chorus has a fully equipped rehearsal room and a library of music literature in the Cochran Chapel, a short distance away. The Chapel also houses two new organs for the use of beginning and advanced organ students. One is located in Kemper Chapel; the other, in the main chapel, is a 30-stop, double manual, tracker action instrument.



VISUAL ARTS

Introductory Studio Courses

Visual Studies

Visual Studies for Juniors

Introductory Design

Introductory Ceramics

Introductory Photography

Intermediate Studio Courses

Visual Studies (Art 10) is a pre-requisite for all intermediate courses.

Drawing

Animation

Drawing and Two-Dimensional Design

Two-Dimensional Design

Three-Dimensional Design

Intermediate Photography

Advanced Studio Courses

Visual Studies (Art 10) is a pre-requisite for all advanced courses.

Graphics and Photography

Studio Photography

Painting

Filmmaking

Advanced Ceramics

Printmaking

Advanced Photography

Sculpture

Photo Illustration

Large Format Photography

Photo Journalism

Kinetics

Architecture

Contemporary Communications

Calligraphy: The Art of Lettering by Hand

Advanced Placement in Studio Art

History of Art: Painting and Sculpture

History of Art: Architecture

MUSIC

Applied

Beginning Instruments

Recorder Ensemble

Brass Ensemble

Woodwind Ensemble

String Ensemble

Fidelio Society

Band

Chorus

Chamber Orchestra

Private Instrumental and Vocal Lessons

The Nature of Music

Developing Musical Skills

Opera Seminar

History and Appreciation

Independent Study in the History and Literature of Music

Jazz

Popular Music in America

Theory

Orchestration and Conducting

Theory of Music I

Theory of Music II

Theory of Music III

Electronic Music

Advanced Techniques in Electronic Music

THEATRE AND DANCE

Theatre

Introduction to Acting

Public Speaking

Acting and Directing Workshop

Stagecraft

Play Production

Shakespearean Workshop

Playwriting

Dance

Introduction to Dance

CLASSICAL STUDIES

The chief aim of the Department of Classics is to help students rediscover the sense of order and ideals which has been the glory of the ancient world of Greece and Rome. Through its elective courses in Classical Studies, taught in English, students can survey the history and the thought of Classical Civilization and its influence and importance to their experiences in the world we face today.

CLASSICAL STUDIES

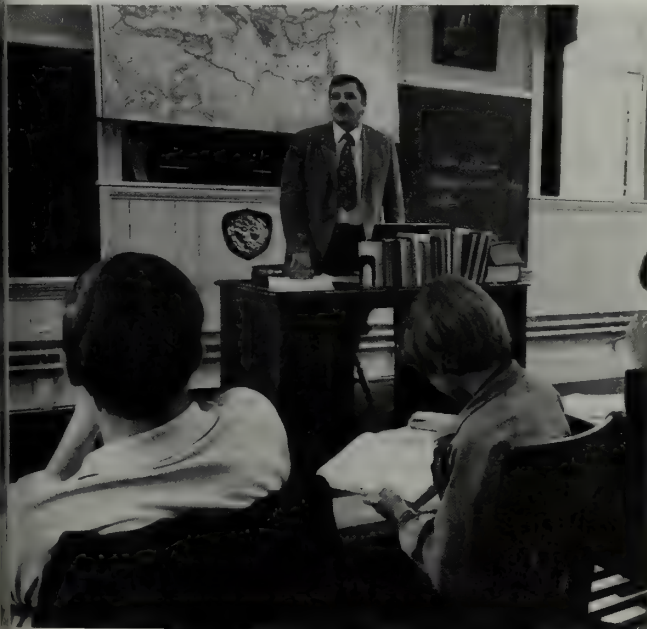
Greek Civilization
Roman Civilization
Etymology
Ancient History
Classical Mythology



ENGLISH

Convinced that level of achievement is more important than the number of years a subject is studied, the English Department has established modest but firm diploma requirements. Students must prove themselves competent in writing and reading through the English Competence course and, by taking the Literature Sequence, acquire a sense of the depth and breadth of their literary heritage. For students who enter in the 9th grade, English 10: The Journey, which is a preparation for the Literature Sequence, is also required.

Once the student has successfully completed the diploma requirements, opportunities multiply. Students may enroll in any of the Literature Sequence courses that they have not yet taken, or they may study any of the advanced or specialized courses offered by the department. Seniors may also qualify for an independent project supervised by the teacher of their choice.



ENGLISH

Introductory Courses

English 300 (for Seniors and Postgraduates)

Required Sequence Courses

English Competence (three terms)

Lit B, The Satiric View, The Tragic View or The

Mythic View (two terms)

Lit C, Shakespeare (one term)

Elective Courses

(Only courses with sufficient enrollment will be given.)

Irish Studies

British Writers

American Writers

Introduction to Writing

Afro-American Literature

James Joyce

Man and God

20th Century Drama

Shakespeare: The Man, The Times, The Theatre,
The Plays

Satire and Comedy

Novel and Drama Seminar

Creative Writing

The Short Novel

Milton and Spenser

Chaucer and His Age

Wit and Poetry in the Seventeenth Century

Images of Women



Graceful Bulfinch Hall (1819) has been in Academy use for more than 150 years as a recitation hall, gymnasium, and dining hall and now houses Andover's English classes. Dr. Oliver Wendell Holmes, class of 1825, immortalized "the classic hall" in his poem, "The School-boy," written over 100 years ago for the Academy's Centennial Celebration. In 1984, Bulfinch received a full interior restoration, to reflect its original early 19th century design.

HISTORY AND THE SOCIAL SCIENCES

The study of history and the social sciences provides certain kinds of knowledge, skills, and understanding fundamental to a liberal education. A study of the American past continues to be a prerequisite for a participating citizen in a constitutional republic. Vital though such a study is, an examination of other cultures, both European and non-Western, is crucial for broadening a student's understanding of an interdependent world. The department of history and the social sciences, therefore, integrates the study of non-Western cultures into courses at every grade level.

For Juniors, the department offers a three-term survey of Western civilization from the ancient to the medieval world. Although the primary goal is familiarity with Western institutions and ideas, students examine contemporaneous developments in the non-Western world. Another sequence, primarily for Lowers, allows students to continue their survey of the modern world—both Western and non-Western—from the 14th to the 20th century. Through these elective courses, students learn skills and concepts essential to the study of history, and thus prepare for more advanced courses in the field.

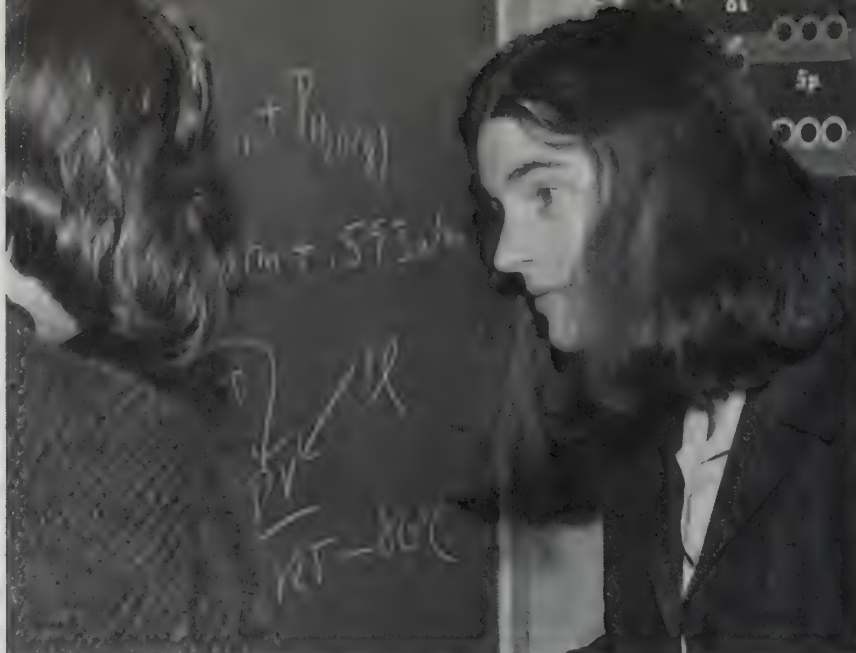
In the Upper year, most students study United States history. Three terms of U.S. history, followed by a term of non-Western history or international social science, satisfies the department's four-term diploma requirement. Seniors may choose from a variety of area histories: Russia, Asia, Africa, Middle East, Latin America; or from social-science courses: Introduction to Economics, Comparative Government, International Relations. A yearlong Advanced Placement survey of Modern European history is also available to Seniors, Uppers, and exceptional Lowers. Seniors who wish to surpass the requirement may take advanced seminars in the Renaissance, Issues in Economics, American Race Relations, Men and Women and American Culture, Social History of Families in America, Courts and Constitutional Development, and Nuclear Weapons.

In the required United States history course

and in several of the Senior electives, students write extensive research papers, using government documents, newspapers, letters, diaries, interviews—the raw materials of history. For qualified Uppers and Seniors, there are two programs of special interest: a student may spend the spring term in Washington, D.C., working as an intern in a congressional office, or may join the Urban Studies Institute, which involves both course work and field work centering on the city of Lawrence.

HISTORY AND THE SOCIAL SCIENCES

Ancient History
Classical History
Medieval History
Early Modern World
The World in the Eighteenth Century
The World in the Nineteenth Century
United States History
United States History for International Students
Modern European History
Introduction to Economics
Urban Studies Institute
Comparative Government
International Relations
The Russian Experience
Asia: China, Japan and India
Africa and the World
The Middle East
Latin American Studies
History and Mathematics
Victorian England: England in an Age
of Expansion
Issues in Economics
American Race Relations
Men, Women and American Culture
Nuclear Weapons: Proliferation and Responses
The Renaissance
A Social History of Families in America
The Courts and Constitutional Development,
1935–1985



MATHEMATICS

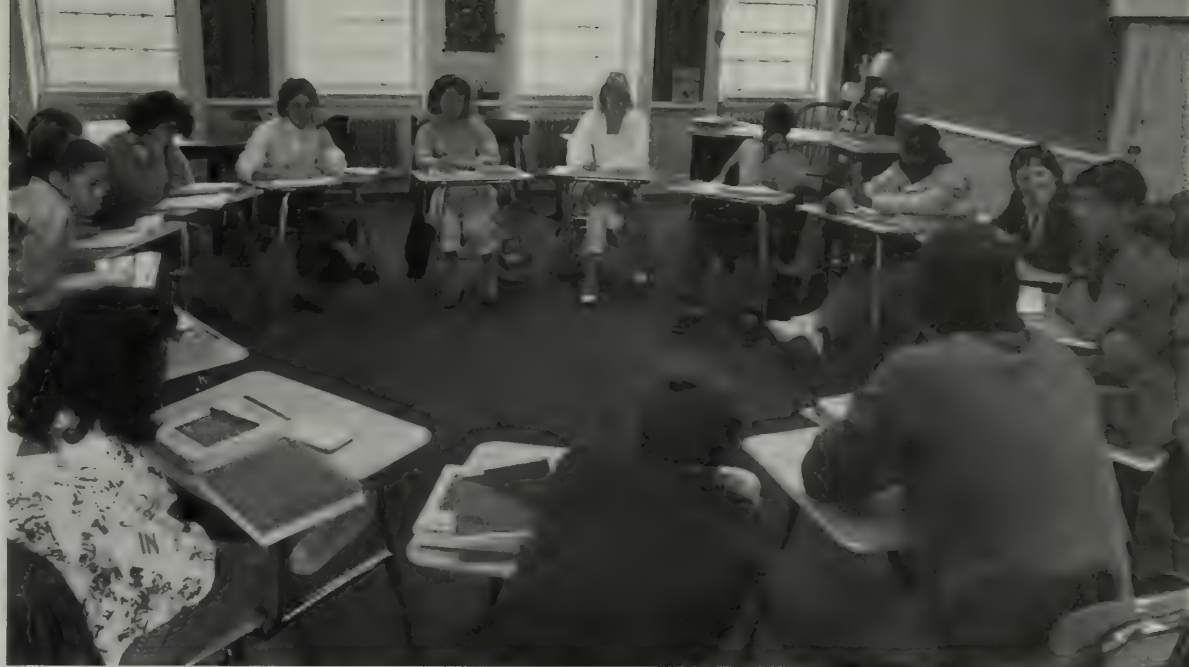
Mathematics at Andover is addressed to several overlapping audiences within the student body: the future citizen of late twentieth century society, immersed in a culture which has been shaped to a large extent by mathematical perceptions of reality; the future user of mathematics, whose vocation may depend upon special knowledge of a mathematical sort; and the future mathematical scholar, who may turn his or her energies and curiosity to the organization of mathematical knowledge.

The mathematics curriculum is built around a core sequence of eight trimester courses, three of elementary algebra, two of geometry, one of intermediate algebra, and two of precalculus topics, completion of which will satisfy the diploma requirements. An additional trimester is required before entering calculus. Students whose previous course was elementary algebra will take *Geometry* unless our placement test indicates a need for further work in algebra first. Those who enter with one year of algebra and one year of geometry will satisfy our diploma requirements by taking intermediate algebra and the first two precalculus trimesters unless the

placement test shows a need for *Algebra Consolidation* first. The latter course prepares the students to take the precalculus courses beginning in the spring term of their first year. There are a variety of special courses designed for new students who fall between the above criteria.

The department also offers many elective courses, descriptions of which may be found in the *Course of Study*. Over one-third of all mathematics is taken electively, much of it in preparation for the Advanced Placement Examinations in calculus. These courses include the study of elementary and advanced calculus, analytic geometry, infinite series, probability, statistics, computer science, linear algebra and vector analysis.

The Mathematics Department is located in Morse Hall, which also houses two computer labs. One lab has 16 IBM Personal Computers (networked) and the other has 7 Apple IIe computers. A variety of computer courses is offered that range from an introduction to computers to preparation for the Advanced Placement tests in Computer Science. Computer languages taught include LOGO and Pascal.



The community of students who like math at Andover is sizeable. They share their curiosity and knowledge by offering to tutor other students at the school, and by participating in interscholastic competition under the aegis of the Math and Computer Clubs.

MATHEMATICS

Courses leading to satisfaction of the diploma requirement

Elementary Algebra

Algebra Review

Geometry

Algebra Consolidation

Geometry and Precalculus

Intermediate Algebra

Precalculus

Elementary Functions

Elective Courses

Analytic Geometry

Calculus

Computer Programming: beginning, intermediate and advanced

Linear Algebra and Vector Calculus

Probability

Statistics

Discrete Mathematics

FOREIGN LANGUAGES

As long ago as 200 B.C. the Latin poet Ennius used to say that because he knew three languages he had three hearts. Andover can render no finer service to today's world than to send forth its alumni with many hearts, ready and able to feel for, to understand, and to respond to the millions of people who speak languages other than English.

Acknowledging the importance of foreign languages, Andover requires for the diploma three years of an ancient or modern language. The ancient foreign languages offered are Greek and Latin, the source languages of Western thought and literature. The modern foreign languages offered are Chinese, French, German, Italian, Russian and Spanish. Emphasis is on the spoken word, and the foreign language is the basis for all communication in the classroom. Small classes make possible maximum participation, with supplementary practice provided by our versatile language laboratory. There are

opportunities to join accelerated classes which complete, for example, the work of four years in three.

At the 4th-, 5th- and 6th-year levels the study of literature may be supplemented by courses in the art, history, geography and music of the foreign country. In upper-level courses students can prepare for Advanced Placement Examinations in language and literature and qualify for advanced courses when they enroll in a college. Superior students may carry out independent projects, including apprentice teaching, under careful guidance.

At all levels of study progress in the foreign language is facilitated, and the resources of the classroom are expanded, through occasional use of communication media (periodicals, radio, videotapes, computers) and such activities as the staging of plays, the use of the school's radio station for broadcasts in foreign languages, festivals, language tables in the dining room, movies, clubs, visits by performing groups, and trips to language events in Boston and at nearby schools and universities. Students are urged to consider opportunities, sponsored by Andover or by other schools, to live and study abroad.

For Andover's School Year Abroad program, and other foreign off-campus opportunities, see page 44.

Chinese

Traditions in China are deep and have been unfamiliar to Western eyes and ears for centuries. In the modern world we have a shared future. Understanding and learning the Chinese language is a key to that future. Andover is one of very few secondary schools to commit itself to a fully integrated, four-year program in Mandarin Chinese.

French

Before the outbreak of the French Revolution, French was considered the universal language of the West. It was the language of diplomacy, was already flourishing as a literary medium and, because of its clarity and precision, reflected both French culture and philosophy, influencing the development of democratic institutions in the

United States as well as in other countries. The study of French rewards the student with the ability to communicate with French-speaking peoples and to appreciate the importance of order in expression, broadening his views through a growing familiarity with the rich and lively literature and civilization that the language represents.

German

German is central Europe's principal language, and knowledge of it opens up an understanding of European culture and affairs. Students may learn German to read the works of Goethe, Schiller, Lessing, Kafka, Hesse, Brecht and Grass in their original form, or to follow the arguments of Hegel and Nietzsche, or perhaps to understand more intimately the background of modern socialism and democracy in the world. Many of the most important developments in modern physics, electronics, chemistry and engineering were originally published in German, and American businesses are realizing increasingly the importance of personnel able to speak German.



Greek

Through the study of Greek, the Department of Classics offers students a feast at the banquet of the first and still most relevant literature of the Western World. Through direct experience with such men as Homer and Plato, students will discover a sense of order and ideals in the expectation that they may apply it, in turn, to the challenges they face today. Greek, as one of the languages chosen to fulfill the diploma requirement, is often elected by students as a second or even third language in conjunction with Latin or a modern language. It remains an important basic course for students with a deep interest in literature or philosophy.

Italian

The growing popularity of Italian in American schools and colleges reflects a growing awareness of the charm of the Italian language and of the rich cultural heritage which it serves. Andover's intensive course for Seniors attracts students with rich experiences in other languages, is conducted in Italian, and has the scope and pace of a course for college freshmen.

Latin

Latin—still? Yes, as futuristic nightmares and present turmoils are reawakening a search for order, perspective and ideals in the human experience, names like Cicero, Vergil, and the *pax Romana* not only symbolize great milestones in that search but also suggest habits of mind that produce enduring greatness—the same habits of mind that show up so clearly in a sentence, paragraph or entire work of Latin literature.

Through the study of Latin, the Department of Classics offers students direct experience in Latin literature, both in the original and in translation, which is rightly called the mother tongue of Western Civilization. Latin, as one of the languages frequently chosen to fulfill the diploma requirement, is also often chosen as a second or third language. It is a particularly valuable experience for students of other European

languages who have an interest in doing advanced study in foreign languages.

Russian

Approximately forty percent of Russian secondary school students are learning English. A fraction of one percent of American secondary school students study Russian. For cooperation, understanding, and influence, our doctors, diplomats, scientists, and businessmen should be able to communicate with Soviet counterparts in Russian.

Since secondary school is the best place to begin, Andover has established a rich program for our beginning as well as our advanced students.

Spanish

The Spanish Department is anxious to help students discover the varied cultural heritage of the Spanish-speaking world through intensive study of the language, both spoken and written.

It seems particularly important to learn a language spoken everyday by millions of Americans across the U.S. In addition, Hispanic literature, from Cervantes to Borges, has played a vital role in world literature, as attested by the frequency with which Hispanic writers have been awarded the Nobel Prize for Literature.

Students who enter the professions will find Spanish an indispensable tool. But whatever they do, Spanish will be the key to a richer, more rewarding life.

The Language Laboratory

The Language Laboratory, located on the second floor of Samuel Phillips Hall, is a facility designed to expand and enhance the classroom experience in foreign languages. Consisting of a microcomputer-controlled cassette system, the lab offers a variety of teaching and learning possibilities for classes or individual students. With a master console and 28 student positions, the lab is always available and supervised during class hours and evenings.

FOREIGN LANGUAGES

Italian offers an intensive introductory course for seniors. All other languages offer introductory and intermediate courses, with opportunities for acceleration at those levels. Students are then eligible for the following courses:

Chinese

Literature, Philosophy and Language Review
Literature, History and Current Events

French

Language and Review and Contemporary French Life
Selected Readings
Village Français
French Civilization
Conversation and Phonetics
Written Expression
Literature and Film: French Theatre
French Literature
French History
French Civilization Outside of Europe
Québec et les Québécois
Stylistics

Advanced Placement
Contemporary Literature

German

Literature, Composition and Conversation
Language and Literature for Advanced Placement
Special Topics

Greek

First Year: basics of language and culture
Accelerated First Year: two years in one
Second Year: Xenophon, Plato, New Testament
Third Year: Homer and Euripides
Fourth Year: Sophocles, lyric poetry, Thucydides

Latin

First Year: basics of language and culture
Accelerated First Year: two years in one
Second Year: Cæsar, Ovid, Nero
Third Year: Cicero, Vergil, Apuleius
Fourth Year: Vergil, Suetonius, Catullus
Fifth Year: Vergil, Tacitus, Pliny, Horace

Russian

Literature, Composition and Conversation
Advanced Literature, Composition and Conversation
Russian Press
Literature
Special Topics
Russian History and Literature

Spanish

Second and Third Year, Advanced, with winter term in Mexico
Spanish Language Review
Aspectos de la Cultura y Civilización del Mundo Hispánico
Introduction to Literature, with Grammar Review
Literature and Culture, with Grammar Review
Literature for Advanced Placement
Advanced Studies in Literature
Special Topics: Literature, Sociology, Culture
Latin American Studies



PHILOSOPHY AND RELIGIOUS STUDIES

The department seeks to initiate students into three distinctive and interrelated human quests: the search for meaning, the search for justice and the search for the foundations of knowledge. The process of initiation is intended not only to provide an introduction to outstanding literature in the field, but also to assist the student in effecting personal appropriation of the search and in developing the necessary qualities and skills for its pursuit.

The department is committed to exploring these basic human concerns with imaginative empathy and by means of dialogue and rational inquiry, so far as these may take us. It seeks to encourage growth in understanding and empathy among different cultures, traditions and social groups. Beyond this the department is not committed to any particular pattern of expression or response to the area of study. No topic, subject or pattern is excluded a priori. Decisions on course offerings and academic projects take into account the interests and background of the students and faculty and the potential for furthering general departmental goals.

Courses are term contained, involve four prepared class periods and are offered at various levels on the following topics:

- The Biblical World View
- The New Testament Perspective
- Religious Discoverers
- Varieties of Religious Experience
- Introduction to Non-Western Religions
- Introduction to Ethics
- Proof and Persuasion
- Responses to the Holocaust
- Views of Human Nature
- Law and Morality
- Bioethics
- Nonviolence in Theory and Practice
- In Search of Meaning
- Existentialism
- In Search of Justice
- Great Philosophers

SCIENCE

Biology

Andover provides ample opportunity to develop interest in the biological sciences. In addition to two yearlong courses in introductory biology, the department offers three courses on the advanced placement level, three intermediate courses, and three elementary courses which are particularly well suited to serve younger students. The introductory courses give students a general background and an understanding of some of the current trends in biology. Field trips, laboratory work, independent projects, lectures, slides, films, and video tapes are all part of the courses. Most of the laboratory work performed during the spring term is devoted to independent projects.

The intermediate courses provide an exposure to biology for students who prefer chemistry and physics (since the science requirement specifies some work in both the biological and the physical sciences) as well as providing additional work in biology for students who enjoyed the introductory courses.

Because of recent changes in the Advanced Placement examination we have chosen not to offer a course specifically directed at advanced placement. Students who are particularly interested in biology are encouraged to take biology as juniors or lowers, followed by a year of chemistry and a year of physics, and then to take those advanced biology courses which interest them. The term-contained advanced courses review material presented in introductory courses, present new concepts and techniques, and permit us to study some topics in considerably more depth than is usual in a typical Advanced Placement course. The laboratory and field work in these courses gives students experience with the techniques of chromatography, electrophoresis, spectrophotometry, statistical analysis, dissection, and genetic engineering, as well as qualitative and quantitative field analyses. Computer simulations are also used on our Apple II microcomputers. Many students who take the advanced sequence take the Advanced Placement examination.



Bird watching trips are sponsored occasionally throughout the year by the Natural History Club for interested students who may or may not be enrolled in a biology course. A small animal collection consisting of rats, mice, gerbils, and various reptiles is maintained in Evans Hall. Its population varies with student interest, the reproductive rate of the animals and the dietary needs of the resident boa. In the basement of Evans Hall there is a superb bird collection on loan from Harvard University and an extensive shell collection is exhibited in various parts of the building.

The Evans Hall greenhouse is a refreshing place to visit during the long winter months. Students grow plants there or start potted plants for their own rooms. An environmental growth chamber is available for those interested in experimenting with photoperiodism.

Chemistry

A variety of Chemistry Department offerings are designed to suit the range of interests and abilities of the students in their study of the composition and interactions of the physical world. Three levels of yearlong courses introduce students to atomic structure, elements, chemical

reactions, bonding, gases, liquids, solids, solutions, thermochemistry, kinetics, acids and bases, electrochemistry, nuclear reactions, and organic molecules. There are Advanced Placement offerings for one year or two years of study. In addition, a series of term courses are offered in such areas as general chemistry, organic chemistry, chemistry of nutrition, environmental chemistry, geology, chemical research, and, for ninth graders, an introduction of elements and compounds, which is a lab-oriented class.

The observation and interpretation of chemical phenomena are central in the chemistry curriculum. Students perform laboratory experiments related to course work as well as observe classroom demonstrations. A quantitative understanding of these phenomena is achieved through frequent problem solving. Class library projects, in which students read in the literature on the greenhouse effect, acid rain, and toxic wastes, aim for an appreciation of the application of chemical principles to the "real world."

The department has excellent equipment for experiments in elementary syntheses and analysis, including analytical balances, visible and infrared spectrophotometers, pH meters, voltmeters, a gas chromatograph and a bench top furnace.

Physics and Astrophysics

The Physics Department offers several introductory courses at various levels of difficulty in order to meet the needs of Andover students. Some representative topics are mechanics, waves, heat, electromagnetism, light, and "modern physics." Laboratory work, classroom demonstrations and extensive problem solving enable students to develop both a qualitative and quantitative understanding of the concepts of physics. Also offered are courses including electronics, astronomy, relativity and early quantum theory, and university-level Advanced Placement physics.

The Physics Department operates the Thornton Observatory which houses a research-grade 16-inch reflector, a 6-inch Brashear refractor and six other portable telescopes. These instruments are used in astronomy courses as well as in

project work; recent projects have included such areas as solar, lunar and planetary study; astrophotography; computer simulations; and orbit analysis.

The department is well equipped with laboratory and demonstration equipment such as an air track to eliminate friction, photogates for precise timing, cathode ray oscilloscopes for a multitude of uses, and computers for rapid data analysis, word processing or programming. These items and many more are available and used in classroom demonstrations and student laboratory work.

Past student projects have included laser transmission of information, holograms, the construction of an electronic calculator, speed of light measurements, determinations of the electronic charge and mass, interferometer measurements, and finding the gravitational constant.

PSYCHOLOGY

The Psychology Department offers a variety of elective courses which examine fundamental concepts in the field. Particular emphasis is placed on helping the student explore the interface between psychological knowledge and personal growth. This is accomplished by utilizing teaching strategies which integrate formal academic work with frequent opportunities for student participation and self-exploration. The Introductory Psychology and Developmental Psychology courses offer an overview of the fundamental ideas and classic experiments in psychology and consider the complexity of human and social development. The Human Relations course examines how individuals behave in groups and how healthy relationships are formed and maintained.

Biology

Introduction to Zoology
Oceanography
Ornithology
Introductory Biology
Biology
Human Ecology
Human Biology
Animal Behavior
Ecology and Evolution
Human Physiology
Molecular Biology
Laboratory Research in
Biology and Chemistry

Chemistry

Elementary Introductory
Chemistry
Introductory Chemistry
Research in Chemistry
Elementary Organic Chemistry
Advanced Placement Chemistry
Honors Introductory Chemistry—Advanced Placement
Geology
Physics
Observational Astronomy
Cosmology—The Universe
Beyond the Solar System



Dr. Charles Abbot, class of 1891, a solar energy pioneer and head of the Smithsonian Institution for many years, predicted in the early 1940's that solar energy would become the primary source of power when oil and coal were depleted. In 1972 he received his last patent, for a device to convert solar energy into electricity, shortly before his 100th birthday.

Introductory Physics

Advanced Physics

(B-level, Advanced Placement
C-level, Advanced Placement)

Electronics

Relativity and Quantum
Mechanics

PSYCHOLOGY

Introductory Psychology

Human Relations

Developmental Psychology

OTHER COURSES

STUDY SKILLS

Basic Study Skills
Efficient Reading Skills
Language Skills

PHYSICAL EDUCATION

All Juniors and new Lower
Middlers are required to elect
one trimester of P.E. 10 in
addition to their regular athletic
commitment.

Physical Education



Complementary Programs

Andover's complementary programs combine a number of innovative ideas designed to promote better coordination between public and private education nationally. The concept behind these programs is that of multiple schools. While one school may be accepted as the "home-base" diploma-granting institution, several other institutions may be utilized as complements to this school. Thus far, the multiple schools ideas has taken form in several program models which are open to Phillips Academy students as well as students from other schools.

The Andover Summer Session

The Andover Summer Session is a short, intensive academic program in which both innovative and traditional courses are taught in only six weeks. Courses in all subjects and at all levels demand hard work—harder work than most students have ever before experienced. Besides English, modern languages, mathematics, history, and the sciences, the curriculum offers such opportunities as Play Production Workshop, Social Psychology, Great Philosophers, Law and Morality, Modern Astronomy, Oceanography and Marine Biology, and Economics.

Other features of the Summer Session are special courses in writing, including the nationally known "Competence in Writing" (developed at Andover); an expanded ESL Program (English as a Second Language) for foreign students who wish to achieve English fluency; a Chamber Music Program which provides a unique opportunity for able music students in all combinations of piano, strings, winds, and voice, including individual instruction, small ensemble work, orchestra, and chorus; and an intensive Studio Art program for serious students of the visual arts who wish to develop a portfolio in preparation for the Advanced Placement Examination in Studio Art.

The Summer Session makes use of all the school's facilities and is open to able boys and girls from all parts of the country and abroad. Applicants must be graduates of the 10th, 11th or 12th grades. A catalog can be obtained by writing:

Phyllis Powell, Director
The Andover Summer Session
Phillips Academy
Andover, MA 01810
Tel. (617)* 475-3400, ext. 292

(MS)²: Math and Science for Minority Students

The (MS)² Program—Math and Science for Minority Students—offers black, Hispanic, and American Indian students from selected urban centers three consecutive tuition-free summers of intensive study of mathematics and science. Ninth grade boys and girls are selected on the basis of their superior ability and strong interest in mathematics and science, as well as financial need. The goal of the (MS)² Program is to prepare minority students to compete successfully for admission to selective colleges and for careers in science, engineering and medicine. Further information can be obtained by writing:

Walter A. Sherrill, Director
(MS)² Program
Phillips Academy
Andover, MA 01810
Tel. (617)* 475-3400, ext. 293

**Note: as of 7/88, area code (508)*

Students currently enrolled at Phillips Academy's regular session are ineligible to attend the Andover Summer Session or the (MS)² Program. Students attending the Andover Summer Session or the (MS)² Program may not apply for admission to the Academy's regular session for a full calendar year.



Randy Pepper, an instructor in English, author, and a contributing photographer to *National Geographic* magazine, created a new course in the 1985 Summer Session entitled "Oceans." A combination of marine biology, environmental studies, and oceanography, the course includes four weeks of study in the labs at Andover, and two weeks "in the field," sailing along the New England coastline aboard the 55' schooner *Madame Sarah Abbot*, named for the founder of Abbot Academy.

School Year Abroad

School Year Abroad offers to qualified Upper Middlers and Seniors a full academic year of living and studying in France or Spain. Originated by Andover, SYA is now jointly sponsored by Andover, Exeter and St. Paul's School. The program gives American students the advantages of living in a foreign culture without sacrificing progress at their home schools or strong preparation for college. Students live with host families, participate in the activities of local athletic and social clubs, and pursue a course of study (both in English and Spanish or French) under the supervision of sponsoring school teachers. SYA offers over two weeks of group travel, all college boards, and provides full academic credit, permitting students to graduate from Phillips Academy with their own class. School Year Abroad is financially independent of its sponsoring schools. Financial aid is available. A catalog can be obtained by writing:

Woodruff W. Halsey II, Director
School Year Abroad
Phillips Academy
Andover, MA 01810

Trimester Programs in Foreign Countries

Andover offers small numbers of qualified students trimester programs in several foreign countries. It is possible for advanced language students to attend a local school in the following cities: Fall Term, Novosibirsk, Soviet Union; Paris, France; Winter Term, Göttingen, Germany; Madrid, Spain; Antibes, France; Spring Term, Guadalajara, Mexico; Bologna, Italy; Beijing, China; summer, Harbin Institute of Technology, Harbin, China; University of Salamanca, Salamanca, Spain. Each program has its special characteristics. For more information consult the Chair of the Division of Foreign Languages.

Other Off-Campus Programs

Andover offers several complementary residential programs. The Washington Intern Program, sponsored by Andover and Phillips Exeter Academy, allows a group of Upper Middlers and Seniors to spend the spring term in Washington working in the offices of U.S. Senators and

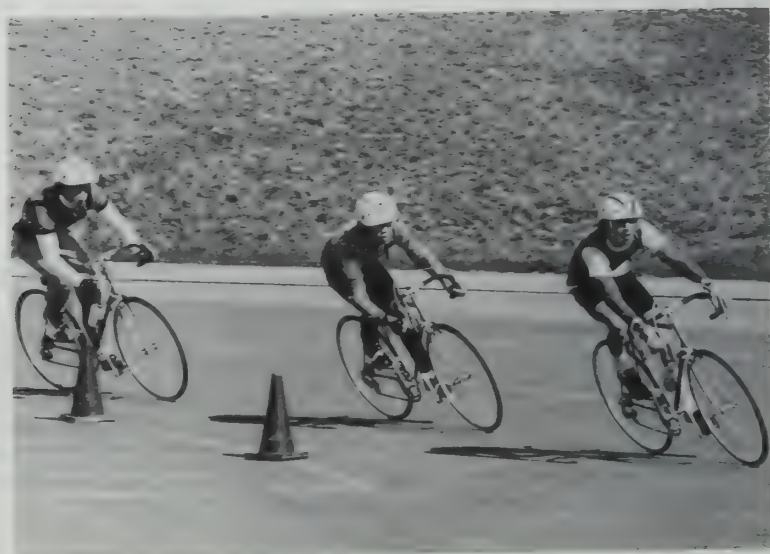


Representatives. Phillips Academy tuition, fees, and financial aid do not cover the cost of this program.

The Mountain School Program of Milton Academy is a semesterlong program for eleventh graders which offers students the opportunity to enjoy a different living and learning experience on a 300-acre farm in Vermont. Phillips Academy students may participate fall term only. Students will continue their academic courses in addition to activities which will emphasize practical skills and crafts. Students will work on the Mountain

School farm which supplies most of the food and heat for the school.

In addition to the School Year Abroad Program, term-contained opportunities for study abroad are available for Seniors with advanced language skills. It is also possible for Seniors to arrange off-campus projects related to their special interests, though tuition rebates are not normally granted for projects which are not part of school-sponsored programs.



Athletics



Following the merger of Abbot and Phillips Academies in 1973, the girls began to share more than the classroom with the boys. The first Phillips Academy Girls' Varsity Ice Hockey team was formed in 1977, and continues today with matches against many independent schools, colleges and universities in New England.

In sports, as in studies, students are expected to meet basic requirements and are given wide choice in broadening and deepening their skills, interests and dedication in athletics.

Juniors and new Lower students take a challenge-based Physical Education Course five hours a week for one term in addition to afternoon athletics. While taking this course, students are tested for physical aptitude and instructed in safety, health and exercise physiology.

The required afternoon athletic program includes a wide variety of offerings in varsity and sub-varsity competitive interscholastic sports, in intramural cluster-organized athletics and in instructional, recreational and fitness activities. New students are strongly encouraged to participate for at least one term at Andover in a team sport or a dance performance program.

Each spring the department offers an evening Senior Life Saving course and a Water Safety Instructors' course, in addition to required athletics, for those swimmers who wish official accreditation.

The school maintains several athletic facilities which include 17 playing fields and 25 tennis courts; the Borden, Memorial and Abbot Gymnasium Complex with swimming and diving pools, basketball and squash courts, two dance studios, wrestling room, and weight training rooms; the Case Memorial Cage with its indoor track; the Sumner Smith Hockey Rink; the crew boathouse on the Merrimack River; the ski trails and jump at Holt Hill; and finally the Search and Rescue Room in Evans Hall which provides the base of operations for Andover's popular outdoor program.

Phillips Academy is committed to a required athletic program that provides a variety of sports and activities to its students. The Academy discourages overspecialization in sports at this age level. The Athletic Department oversees the program and its facilities with the support and advice of the Faculty Athletic Committee and the Student Athletic Advisory Board.

Isham Health Center

Phillips Academy employs a full-time physician/medical director, a licensed nurse-practitioner, and twelve registered nurses to staff Isham Health Center. Isham has approximately 600 inpatient admissions and 7500 outpatient visits per school year. There are two dentists and a full time dental hygienist who are available for

routine care and emergencies. A sports medicine clinic is run weekly by a board-certified orthopedic surgeon, in conjunction with three full-time athletic trainers who supervise rehabilitation, practices and athletic competitions. A dermatology clinic is held monthly and a registered dietitian is available for consultation with students upon request. The Graham House Counseling Center employs three psychologists, who are available to students seven days a week.

The Isham staff maintains close contact with approximately forty medical and dental specialists in the greater Lawrence and Boston communities, who are readily available for consultation. Isham Health Center also welcomes requests for follow-up and continuing care from students' home physicians.

ATHLETICS

FALL TERM

Boys

Ballet
Crew
Cross-Country
Cycling
Football
Jogging & Fitness
Karate
Modern Dance
Paddle Tennis
Search & Rescue
Soccer
Squash
Table Tennis
Tennis
Water Polo
Yoga

Girls

Ballet
Crew
Cross Country
Cycling

Field Hockey
Jogging & Fitness
Karate
Modern Dance
Paddle Tennis
Search & Rescue
Soccer
Squash
Table Tennis
Tennis
Volleyball
Water Polo
Yoga

WINTER TERM

Boys

Aikido
Ballet
Basketball
Fitness
Gymnastics
Hockey
Jogging & Fitness
Modern Dance

Paddle Tennis
Search & Rescue
Skiing:
Competitive (Alpine and Nordic)
Recreational (Cross Country)
Squash
Swimming
Track
Wrestling
Yoga

Girls

Aikido
Ballet
Basketball
Fitness
Gymnastics
Hockey
Jogging & Fitness
Modern Dance
Paddle Tennis
Search & Rescue

Skiing:
Competitive (Alpine and Nordic)
Recreational (Cross Country)
Squash
Swimming
Track
Yoga

SPRING TERM

Boys

Ballet
Baseball
Crew
Cycling
Golf
Jogging & Fitness
Karate
Lacrosse
Modern Dance
Recreational Cycling
Search & Rescue
Softball

Squash
Team Cycling
Tennis
Track
Yoga

Girls

Ballet
Crew
Cycling
Golf
Jogging & Fitness
Karate
Lacrosse
Modern Dance
Paddle Tennis
Recreational Cycling
Search & Rescue
Softball
Speedball
Squash
Team Cycling
Tennis
Track
Yoga



In the 1840's the widow of Principal Osgood Johnson devoted herself to the care of sick Seminary students at Samaritan House, built and named for that purpose, now a student dormitory. In spite of this, rows of gravestones mark the toll of epidemics. An Academy graduate of 1890 reports that no such care as Widow Johnson's was available to the Academy students of the 1890's: "There was no infirmary. If you were ill, it was nobody's business but your roommate's, who brought you meals from Marland's unappetizing fare."

CALENDAR 1988-1989

Fall Term

- Sept. 11, Sun. Faculty return
- Sept. 15, Thurs. New students arrive and register
- Sept. 17, Sat. Old students return and register
- Sept. 19, Mon. Classes begin
- Oct. 21, Fri. Mid-term academic review
- Oct. 28-30
Fri.-Sun. Parents' Weekend (all parents)
- Oct. 31, Mon. No classes
- Nov. 22, Tues. Thanksgiving vacation begins, 1:00 p.m.
- Nov. 28, Mon. Thanksgiving vacation ends, 8 p.m.
- Dec. 5, Mon. Classes end, 1 p.m.
- Dec. 10, Sat. Christmas vacation begins, 12 noon

Winter Term

- Jan. 3, Tues. Christmas vacation ends, 8 p.m.
- Feb. 3, Fri. Mid-term academic review
- Feb. 6, Mon. Mid-winter holiday (no classes)
- March 7, Tues. Classes end, 1 p.m.
- March 10, Fri. Spring vacation begins, 12 noon

Spring Term

- March 28, Tues. Spring vacation ends, 8 p.m.
- April 24, Mon. College Visiting Day (no classes)
- April 28, Fri. Mid-term academic review
- May 27, Sat. Classes end, 1 p.m.
- May 30, Tue. Spring trimester examinations begin, 8 a.m.
- June 2, Fri. Spring trimester exams end, 6 p.m.
- June 4, Sun. Commencement
- June 8, Thurs. Spring trimester academic review meeting, 9 a.m.
- June 9-11
Fri.-Sun. Alumni Reunions
- June 29, Thurs. Summer Session begins
- Aug. 9, Wed. Summer Session ends

Admission

"Youth from Every Quarter"

The School's *Constitution*, written in 1778, states that Andover "shall be ever equally open to Youth of requisite qualifications from every quarter." With this principle in mind, the basic requirement for admission to Andover today continues to be evidence of sound character and strong academic achievement. The school is especially interested in candidates who demonstrate independence, maturity and concern for others, in addition to high performance in particular studies or activities. Valuing diversity in its student body, the school seeks to bring together a community from all parts of the country and from many nations.

In our experience, chronic illness, handicaps or other limitations are not a barrier to success at



Office of Admission and Financial Aid: Pictured left, bottom: Betsy Eaton, admission officer and admission alumni coordinator; Jeannie Disette, dean of admission; Bobby Edwards, assistant dean of admission; top: Grace Taylor, administrative assistant; Rebecca Carr, assistant dean of admission; Scott Looney, Admission Officer; Peter Drench, assistant dean of admission. Not pictured, Clement Morell, director of financial aid.

Phillips Academy. The school will discuss such problems individually and advise on the appropriateness of the application. Our ultimate goal is to insure the health and happiness of every student.

The school's endowment covers approximately one-third of the cost of an Andover education. Therefore, in fact, every student receives financial aid. In addition, because of the generosity of a large number of alumni and friends, further financial assistance is available (see Financial Aid Section, page 52).

APPLICATION PROCEDURE

Priority will be given to those candidates who complete the application procedure, including the interview, by February 1. A decision from the Admission Committee will be mailed on March 10. The possibility of admission is considerably lessened for all applicants who complete the process after February 1, and decisions for this group may not be rendered before May 1. A deposit of \$300 is required to reserve a place at the time admission is offered to an applicant.

If you have a question:

About Andover's admission or application procedures, call or write the Admission Office.
About an appointment: call or write the Appointment Secretary, Admission Office.
To request a catalog, call or write:

Admission Office
Phillips Academy
Andover, Massachusetts 01810
Admission Office direct line
(617)* 475-9353

Academy switchboard
(617)* 475-3400 x 596

Office hours: Monday through Friday, 8:30 a.m. to 4:30 p.m.
Saturday, 8:30 a.m. to 12:00 noon,
October 1 through January 31

*As of 7/88, area code (508)

4 STEPS TO BE COMPLETED FOR APPLICATION

1 Submit the Preliminary Application Card and the non-refundable \$20 fee as soon as possible. (Checks are payable to the Trustees of Phillips Academy.) **Application will not be considered unless the Preliminary Application Card and Fee are received.**

2 Complete the Personal Interview Requirement. Candidates must complete the required interview by February 1. Candidates are urged to schedule interviews in either the spring, summer, or early fall of the year before they intend to matriculate. It is in everyone's best interests for the interview to take place as early as possible. A visit to the Academy is desirable as it gives candidates a chance to have questions answered and to see the school. Please allow two hours for the tour and interview and be sure to dress with the weather in mind. **Candidates who cannot visit the Academy are themselves responsible for arranging an interview with an Alumni Admission Representative.**
(See page 55.)

3 Return the Final Application Forms. Final application forms, mailed in mid-November to candidates who have filed preliminary applications, should be completed and returned as soon as final or mid-semester grades are available for the fall term. **The transcript must include current grades for application to be complete.** Priority consideration is given to applications completed by the advertised deadline of February 1. ("Late applicants" should return forms immediately.) Teacher recommendations should be from *current* teachers.

4 Take the Secondary School Admission Test. (12th Grade or Postgraduate candidates are not required to take the SSAT.)

Secondary School Admission Test

The Bulletin of Information for Candidates, published by the Educational Testing Service, Princeton, NJ 08540, will be sent by Andover to all 1988-89 candidates who have filed a Preliminary Application. This Bulletin describes the Secondary School Admission Test, which will be given on the following dates:

December 10, 1988	March 4, 1989
January 21, 1989*	April 22, 1989*
June 17, 1989	

*International administration

Candidates are strongly urged to take the SSAT administered in December, 1988. (The December tests will not be given in foreign countries.) Otherwise, the candidates should take the January, 1989 administration.

Early Decision

Andover does not participate in any early decision plan for admissions.

Twelfth Grade or Postgraduate Candidates

Instead of the Secondary School Admission Test, Senior and Postgraduate candidates must take either the Preliminary Scholastic Aptitude Test (P.S.A.T.) or the Scholastic Aptitude Test (S.A.T.) of the College Board Scholastic Aptitude Tests (C.E.E.B., Box 592, Princeton, NJ 08540).

Postgraduates are full-fledged members of the Senior Class and are eligible for all school activities. Because of their academic credits, they frequently have maximum flexibility in course selection.

School Costs and Financial Aid

Tuition and Fees, 1988–1989

The tuition charge for 1988–1989 is \$12,400 for boarding students and \$9,475 for day students.

The average annual cost to educate a student at Andover is approximately \$17,700. The difference between the annual cost and the tuition charge is made up from gifts and income from endowment, which itself is the product of the generosity of alumni, parents and friends.

Day Students

Day students must live in Andover, North Andover, North Reading, Methuen or Lawrence.

Phillips Academy admits students of any sex, race, color, national and ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the school. It does not discriminate on the basis of sex, race, color, national and ethnic origin in administration of its educational policies, admission policies, scholarship and loan programs, and athletic and other school-administered programs.

To reserve a student's place for a given school year, a deposit in the amount of \$300 must be received by May 1 in the case of a returning student, or by the acceptance deadline in the case of a newly admitted student. It is non-refundable under any circumstances.

The tuition less the above deposit is billed in two equal amounts, with the fall payment due August 1, and the final payment due December 1. The award of scholarship aid or loan reduces the billed amount accordingly.

An alternative is the use of the Insured Tuition Payment Plan, arranged with a private agency. Information about this alternative and an application form are sent to the parents before the first bill is due.

No refund will be made of the fall tuition for any student who withdraws, is dismissed, or is absent for any reason after registration in the fall. No refund will be made against the final payment for any student who withdraws, is dismissed, or is absent for any reason after returning to school at the beginning of the winter trimester.

An optional Tuition Refund Plan is offered, at 3% of tuition, to protect against the departure of a student for any reason. Under this plan 75% of the unused portion of the tuition for school days remaining is refunded.

Tuition covers instruction, board, room (including basic furniture), physical training and most athletic privileges, use of laboratory equipment and material, admission to all authorized athletic contests and most authorized entertainments at George Washington Hall or elsewhere on campus, including the Saturday evening movies.

The school charges do not include tutoring, language training, special instruction in music or certain athletics, materials fees for art courses, medical expenses, laundry, textbooks, dues to school organizations or breakage and damage to school property. The school charges do not include cost of participation in the Washington Intern Program, School Year Abroad, or other off-campus programs. The school provides sports

uniforms and most athletic equipment. Students are required to bring their own footwear and urged to bring along whatever other personal athletic equipment they already possess. Bills for items not included in the school charges may be rendered at any time during the school year.

All charges must be paid by their due date in order to assure a student's place at the Academy. Students with past-due bills may be asked to leave any time. The diploma of the Academy will not be awarded to Seniors whose school accounts are not paid in full by June 1.

Other Expenses

The following expenses will generally be similar to those a student would experience if he or she were at home: athletic equipment; laundry and cleaning; dues and publications and spending money.

Travel expense will vary according to home location. Books and supplies depend on course selection, and are approximately \$750.

Financial Aid

Financial need should never discourage a student from applying for admission to Phillips Academy. Andover selects students for admission on the basis of qualifications, not financial circumstances.

Andover offers full Scholarship Grants for low-income families; Scholarship Grants and low-interest, deferred-payment Student Loans for a broad spectrum of need, and Parent Loans for upper-middle income parents.

Scholarship Grants: \$4,000,000 in 1988-89

Average grant: \$7,600

Student Loans: \$250,000 in 1988-89

(presently at 6% interest)

A moderate-interest Parent Loan Program is available to upper-middle income parents who do not qualify for Scholarship Grants or Student Loans, to help them spread educational costs more evenly over the school and college years.

Parent Loans: \$275,000 available in 1988-89
(presently at 9% APR interest)

If you are not sure whether you qualify for financial aid of some kind, we encourage you to apply; this is the best way to find out.



Because Andover values and seeks an economically diverse student body, aid is awarded only on a basis of demonstrated need. In 1988, no qualified student was denied admission for financial reasons.

Need depends on many variables, such as family income, number of children, age of parents, other tuitions, unusual medical expenses, taxes, assets, liabilities, etc.

To apply for financial aid:

1. When you make out the Preliminary Application be sure to check "yes" for financial aid.
2. Andover will send you the Parents' Financial Statement (PFS). Fill it out and send the original to the School Scholarship Service (SSS) in Princeton, NJ. The SSS uses a formula nationally accepted among independent schools to analyze need, and provides Andover with a preliminary estimate of your family's ability to contribute to educational expenses. The process assures that all schools to which a student applies will base their calculations on the same data.
3. Send a copy of the PFS to Andover prior to January 15, along with the most recent IRS 1040 form, or other income tax form used.

Requests for aid filed after the January 15 deadline may not be processed in time to be included in the initial allotment of scholarship funds. Requests filed after January 15 must await subsequent availability of scholarship monies.

In case of divorced or separated parents:

The resources of both natural parents must be considered in cases where a divorce or separation has taken place. This information should be provided on the financial statement provided by the school. The availability of complete information from both parents is essential to assure a fair assessment of the family contribution. Lack of this information may result in no award of aid or an arbitrarily low financial aid package.

Financial aid award letters are mailed in the same envelope as the Certificate of Admission, on March 10.

Parent Loan Plan:

A Parent Loan Plan is available, at a modest rate of interest, to families in the \$50,000 to \$90,000

income range, as their needs require, with preference given to students entering 9th and 10th grades. Repayment of these loans begins immediately, but repayment of the principal is deferred during the students' college years and then continues for two additional years.

For more detailed information, direct your letter or telephone call to the Director of Financial Aid, Phillips Academy, Andover, MA 01810. Telephone: (617*) 475-3400 (ext. 596).

**as of 7/88, area code (508)*

Alumni Admission Representatives

While it is advisable from the student's point of view to visit the school, distance frequently renders a visit impractical. When this is the case, the candidate should write or telephone for an interview with the most conveniently located Alumni Admission Representative. (Please see list on page 55.) When you arrange for an interview with an Alumni Admission Representative, please notify the Andover Admission Office of the date of the interview and the name of the interviewer. This procedure will help us keep your records up-to-date. A candidate unable to arrange for an Alumni Admission Representative Interview should communicate with the Admission Office for assistance.

All interviews with Alumni Admission Representatives must be conducted by January 31 or the candidate will not receive a March 10 decision. Applicants interviewed after January 31 will be considered as late candidates.

ALABAMA

Birmingham

A. Henry Gaede, Jr. '57
Bradley, Arant, Rose & White
1400 Park Place Tower 35203
(205) 252-4500

Fairhope

Peter H. Williams '70
P.O. Box 941 36533
(205) 928-4067

ALASKA

Anchorage

John K. Brubaker '55
2110 Otter Street 99504
(907) 279-3581

Fairbanks

Kelly A. McMullen '66
741 Chena Hills Drive 99709
(907) 479-2964

ARIZONA

Phoenix

Richard L. Morse '53
101 N. 7th Street, #159 85034
(602) 621-4828

William C. Torrey '49
4250 East Camelback Road
Suite 115K 85018
(602) 955-0744

Scottsdale

Peter C. Mohr '54
9259 E. Raintree 85260
(602) 451-0212

Tucson

John S. Greenway '42
2200 E. Elm Street 85719
(602) 325-1541

Donald B. Rollings '70
363 S. Meyer 85701
(602) 623-4091

ARKANSAS

Forrest City

Henry Loeb III '39
P.O. Box 748 72335
(501) 633-1410

Harrison

James E. Liles '55
1206 Eugene Street 72601
(501) 741-8538



Little Rock

Mose Smith III, M.D. '48
5326 West Markham Street
Suite 14 72205
(501) 664-1527

CALIFORNIA

Berkeley

Peter J. Stern '81
1709 Shattuck Ave., #105 94709
(415) 845-5944

Burlingame

Maxwell Steinhardt '73
1436 Balboa Avenue 94010
(415) 342-1293

Corona Del Mar

John E. Kidde '64
3907 Inlet Isle Drive 92625
(714) 640-7075

Fresno

Goffrey M. Brittin, M.D. '52
St. Agnes Hospital
1303 E. Herndon Avenue 93710
(209) 449-3120

Huntington Beach

James B. Blackmon '57
McDonnell Douglas Astronautics
5301 Bolsa Avenue 92647
(714) 786-8500

Long Beach

Alan Fox '60
Petrolane, Inc.
P.O. Box 1410 90806
(213) 427-5471

Los Angeles

David A. Cathcart '57
Gibson, Dunn & Crutcher
333 S. Grand Avenue 90071
(213) 229-7308

George W. Davis III, M.D. '52
4616 Keniston Avenue 90043
(213) 294-1226

Tony De La Rosa '78
Mitchell, Silberberg & Knupp
11377 W. Olympic Blvd.,
8th Floor 90064
(213) 312-2000

Russell K. Decker '56
Decker Management Systems
Ste. 325
515 S. Flower Street 90071
(213) 489-2170

Walter L. Farley, Jr. '28
12300 1st Helena Drive 90049
(213) 476-1028

Elizabeth Figus '42
818 N. Doheny Drive #703 90069
(213) 550-1971

Trevor A. Grimm '56
Kaplanis & Grimm
621 S. Westmoreland Ave.,
#200 90005
(213) 380-0303

Jeffrey Hiroto '77
1133 Hicks Avenue 90063
(213) 264-3498

Joon Y. Kim '80
10380 Glenbarr Avenue 90064
(213) 276-0151

Tim McChristian '73
4070 Seaview Ave. 90065
(213) 222-2132

Thompson K. Vodrey '52
Let's Live Magazine
444 N. Larchmont Blvd. 90004
(213) 469-3901

Marina Del Rey

Jeffrey L. Reuben '78
13952 Bora Bora Way
Apt. 310-F 90292
(213) 301-0464

Menlo Park

Carey Orr Cook '61
1065 Trinity Drive 94025
(415) 398-7474

Peter W. Lee '60
1100 Trinity Drive 94025
(415) 823-5788

William M. Lee '51
271 West Floresta Way 94025
(415) 854-4918

Alumni Admission Representatives

Miranda

Craig B. Reynolds '73
P.O. Box 470 95553
(707) 943-3089

Northridge

Johnson Lightfoote '69
10914 Crebs Avenue 91326
(818) 783-3492

Oakland

Patrick A. Cathcart '64
5844 Margarido Drive 94618
(415) 654-5382

Patrick J. O'Hern '65
Lawrence Livermore
21 Bowles Place 94610
(415) 422-4874

Thomas E. Pollock III '61
6039 Bullard Drive 94611
(415) 398-3825

Frederic C. Thomas '46
P.O. Box 20858 94620
(415) 644-2237

Pacific Beach

Anne W. Rollings '75
P.O. Box 90878 92109
(619) 483-4206

Palo Alto

Donald A. Way '63
320 Kellogg Avenue 94301
(415) 324-0606

Pasadena

Robert J. Cathcart '64
677 LaLoma Road 91105
(213) 622-5555

Graeme Henderson '52
1613 Vista Lane 91103
(818) 449-6152

Thomas J. Keefe, Jr. '50
710 Pinehurst Drive 91106
(818) 577-2418

F. Jack Liebau '81
Primecap Management Company
225 S. Lake Avenue 91101
(818) 304-9222

Judy Mustille '66
1146 Wellington Avenue 91103
(818) 793-4964

Christopher L. Rafferty '66
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Greenville

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STATISTICAL INFORMATION for 1987-1988



In 1864 Shimeta Neesima left Japan as a stowaway on the clipper ship *Wild Rover* for America and sold his samurai sword for a Chinese New Testament. He was adopted by the shipowner, an Andover trustee, was christened Joseph Hardy Neesima, graduated from Andover in 1867, later from Amherst and the Andover Theological Seminary, and became the first Japanese to be ordained a Congregationalist minister. Neesima returned to Japan to found The Doshisha, a great university in Kyoto dedicated to Japanese and Christian ideals. Doshisha recently celebrated its 100th birthday.

Geographical Distribution*

U.S.V.I. & P.R.	0	Bahamas	2
Massachusetts	426	Bahrain	1
Rhode Island	12	Bermuda	1
New Hampshire	40	Botswana	2
Maine	20	Brazil	2
Vermont	13	Cameroon	2
Connecticut	63	Canada	5
New Jersey	41	Republic of China	1
New York	155	Peoples Republic of China	5
Pennsylvania	24	Finland	2
Delaware	4	France	10
District of Columbia	15	Germany	4
Maryland	26	Great Britain	2
Virginia	14	Greece	1
West Virginia	4	Hong Kong	4
North Carolina	20	India	1
South Carolina	8	Italy	1
Georgia	3	Ivory Coast	1
Florida	14	Japan	2
Alabama	2	Jordan	1
Tennessee	9	Korea	2
Mississippi	5	Mexico	1
Kentucky	6	Nigeria	1
Ohio	12	Philippines	1
Indiana	4	Saudi Arabia	2
Michigan	12	Senegal	1
Iowa	5	South Africa	3
Wisconsin	2	Spain	7
Minnesota	5	Sudan	2
South Dakota	0	Switzerland	1
North Dakota	1	Syria	1
Montana	2	Thailand	1
Illinois	31	Union of Soviet Socialist Republics	10
Missouri	4	United Arab Emirates	1
Kansas	0	Yugoslavia	1
Nebraska	1	Total Foreign	85
Louisiana	2	Total US	1127
Arkansas	2	SCHOOL TOTAL	1212
Oklahoma	5		
Texas	21		
Colorado	4		
Wyoming	4		
Idaho	0		
Utah	0		
Arizona	6		
New Mexico	0		
Nevada	0		
California	69		
Hawaii	1		
Pacific Islands	0		
Oregon	2		
Washington	4		
Alaska	4		
Total U.S.	1127		

*Based on place of current
RESIDENCE, not citizenship.

	<i>Girls</i>	<i>Boys</i>	<i>Total</i>
Seniors	179	220	399
Uppers	161	175	336
Loweres	149	155	304
Juniors	77	96	173
	566	646	1212
Total Boarding Students			955
Total Day Students			257
TOTAL			1212

College Matriculations for the Class of 1987

The Class of 1987 applied to 183
different colleges and matriculated at
102 colleges and universities.

COLLEGE	AD- MITTED	MATRIC- ULATED	COLLEGE	AD- MITTED	MATRIC- ULATED	COLLEGE	AD- MITTED	MATRIC- ULATED
Amherst	11	5	MIT	8	5	Wellesley	4	2
Barnard	15	6	U. of Massachusetts	17	4	Wesleyan	27	5
Bates	7	2	McGill/Canada	10	4	Western Ontario/Canada	2	1
Bentley	1	1	U. of Michigan	23	9	Wheaton, MA	1	1
Boston College	10	4	Middlebury	18	3	William Smith	2	1
Boston U	18	3	Mount Holyoke	3	1	William and Mary	8	4
Bowdoin	11	4	New School of			Williams	3	2
Brandeis	5	1	Social Research	1	1	U. of Wisconsin	10	1
Brown	43	23	U. of New Hampshire	10	2	Wooster	1	1
Bryn Mawr	3	1	New York Univ.	4	2	Worcester Polytech	3	1
Bucknell	4	1	State Univ. of NY			Yale	34	25
U. of California			Albany	1	1			
Berkeley	21	9	U. of North Carolina	10	1			
Los Angeles	10	1	Northeastern	1	1			
San Diego	4	1	Northwestern	22	3			
Santa Cruz	10	2	Notre Dame	3	1			
Carleton	7	3	Oberlin	16	4			
Carnegie Mellon	7	2	Oberlin Conservatory	1	1			
Claremont McKenna	3	1	U. of Pennsylvania	33	16			
Colby	8	3	Pitzer	3	1			
Colgate	8	3	Pomona	7	3			
U. of Colorado	16	9	Princeton	13	3			
Columbia	22	8	Queens/Canada	2	1			
Columbia Eng.	3	1	U. of Rochester	13	5			
Connecticut College	22	2	Rollins	3	2			
U. of Connecticut	2	1	St. Andrews/Scotland	1	1			
Cornell	22	9	Scripps	2	1			
Dartmouth	28	17	Skidmore	12	5			
Davidson	3	1	Smith	9	3			
Dickinson	6	1	U. of Southern Calif.	3	1			
Duke	15	6	Southern Methodist	3	1			
Emory	5	1	Stanford	16	10			
Fordham	3	2	Swarthmore	7	1			
Franklin & Marshall	5	1	Syracuse	9	2			
Georgetown	32	12	U. of Texas	6	3			
Hamilton	17	5	U. of Toronto	2	1			
Harvard	32	19	Trinity, CT	26	7			
Harvey Mudd	1	1	Tufts	16	4			
Haverford	5	1	Tulane	10	1			
Holy Cross	5	2	Union	4	2			
Howard	2	1	Vanderbilt	6	1			
U. of Illinois	2	1	Vassar	12	3			
Kalamazoo	1	1	U. of Vermont	8	2			
Kenyon	3	1	Villanova	2	1			
Lafayette	4	2	U. of Virginia	12	7			
U. of Lowell	2	1	Washington U	10	4			
Macalester	3	1	U. of Washington	3	1			

College Admissions

Admission to colleges is not based on a student's mere presence at Andover, but is based on how well the student has used this experience. All selective colleges exercise judgments relative to factors over and above academic ability in selecting a freshman class. While some of these factors relate to exceptional talents in one area or another, others are related to diversity in background and educational objectives.

The college admissions picture is entirely different and infinitely more complex now than it

was in past decades. Competition for admission to selective colleges is rigorous, and Andover students are encouraged to apply across a range of choices to colleges with varying degrees of selectivity. The one constant in all of this should be a real desire to educate oneself. To this end the College Counseling Office works with the class as a whole and with each candidate to help each one draw up a list of colleges that makes sense.

Phillips Academy seniors go to college well prepared for the academic program and social experience that lie ahead.





TRUSTEES

MELVILLE CHAPIN '36
A.B., J.D.
President
elected 1974
elected President, 1981
Cambridge, Massachusetts

DONALD W. McNEMAR
B.A., M.A., Ph.D.
Clerk
elected 1981
Andover, Massachusetts

ROBERT LIVINGSTON IRELAND III '38
A.B., LL.B.
elected 1960
Thomasville, Georgia

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S.B.
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Perrysburg, Ohio

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A.B.
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New York, New York

RICHARD LEE GELB '41
A.B., M.B.A.
elected 1976
New York, New York

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Philadelphia, Pennsylvania

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FREDERICK W. BEINECKE '62
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B.A.
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Houston, Texas

ALEXANDER B. TROWBRIDGE '47
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Forth Worth, Texas

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1952-1976 (Treasurer 1966-1976)
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1969-1988 (Treasurer 1976-1988)
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A.B., D.Sc., Litt. D., L.H.D., LL.D.
1969-1985
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DONALD WILLIAM McNEMAR

Headmaster

B.A., M.A., Ph.D.

PETER QUACKENBUSH MCKEE

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JANE H. MUNROE

Executive Secretary to the Headmaster

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Dean of Faculty

A.B., M.A.

LYNDA DIAMONDIS

Secretary to the Dean of Faculty

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FRANK McCORD ECCLES

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B.S.M.E., M.A.

HERBERT HARRY MORTON, III

Registrar

A.B.

STEPHEN D. CARTER

Scheduling Officer, Associate Dean of Studies

Sc.B., M.A.L.S.

ROSEMARIE ARMSTRONG

Recorder

B.S.

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Dean of Residence

B.A., M.A.T.

REBECCA M. SYKES

Abbot Cluster

A.B., M.S.W.

PAMELA BROWN

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L.D., B.A., M.Ed.

HELMUTH W. JOEL, JR.

Rabbit Pond Cluster

B.A., M.A., Ph.D.

JOHN A. GOULD

West Quadrangle South Cluster

A.B., M.A.

VICTOR W. HENNINGSEN, III

Flagstaff Cluster

B.A., A.M., Ed.M., Ed.D

DAVID B. POTTLE

West Quadrangle North Cluster

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B.B.A.

JUDITH A. HAUPIN

Associate Comptroller

B.S.

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REBECCA CARR

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B.A.

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B.A.

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B.A.

D. SCOTT LOONEY

Admission Officer

B.A.



FACULTY 1987-88

The date following the name indicates the year the instructor joined the Andover faculty. This reflects the faculty for the 1987-88 school year.

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IRENE AGUERO (1987)
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MAX ALOVISETTI (1986)
Psychological Counselor, Instructor in Psychology
B.A., M.A. City College of NY; Ph.D. University of RI

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Instructor in History and the Social Sciences
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CHARLES EMORY APGAR, III (1969)
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JORGE ARTETA (1986)
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B.A. Tufts

VINCENT B.J. AVERY (1976)
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Director of Academic Counseling Program
B.S. University of Nebraska; Ed.M. University of Lowell
- MICHAEL BROWN (1986)
Technical Director Theater Department
- PAMELA BROWN (1980)
Dean of Pine Knoll Cluster, Educational-Director of Computer Literacy Center
B.A. Penn State; M.Ed. Boston College; L.D. Certificate Curry College
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Director of Computing
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Instructor in History and the Social Sciences
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Director of Parent Fund
B.A. University of Rochester
M.A. Cornell
- NEIL H. CULLEN (1986)
Chief Financial Officer
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- GRACE E. CURLEY (1986)
Director of Planned Giving
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Director of Oliver Wendell Holmes Library
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Dean of Studies, Instructor in Mathematics on the Independence Teaching Foundation Endowment, Co-Director of Andover Dartmouth Teachers Institute
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Director of Capital Development
A.B. Mount Holyoke; M.A.T. Radcliffe
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Asst. Dean of Admission
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Curator of Addison Gallery
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Associate Director of College Counseling
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Jewish Chaplain, Instructor in Religion and Philosophy
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Instructor in English
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ELWIN SYKES (1973)

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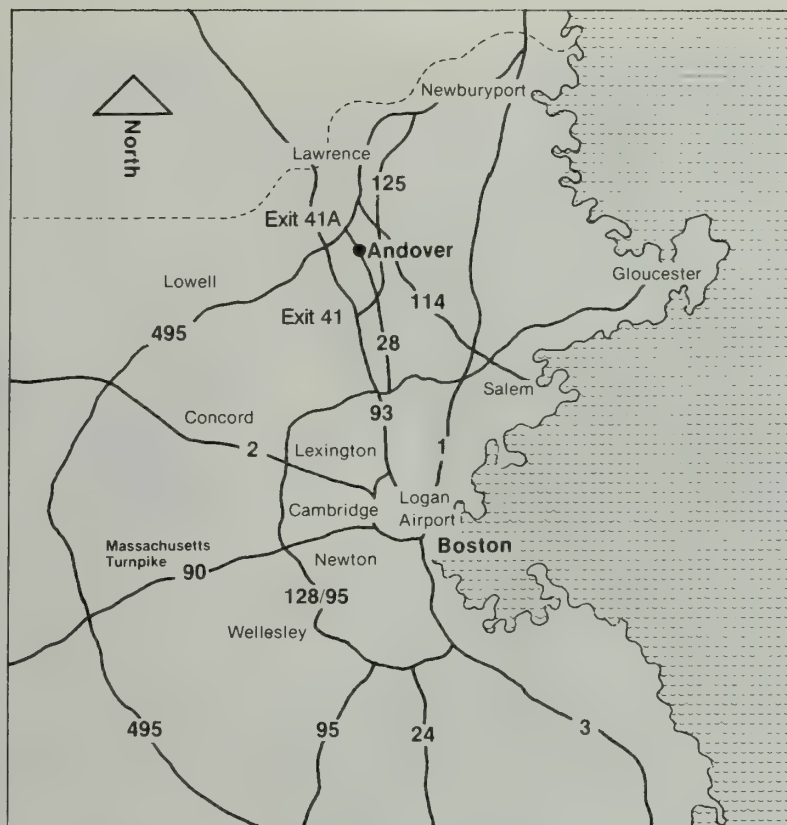
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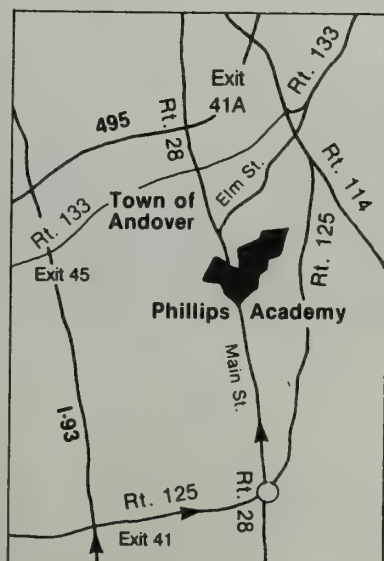
TRAVELING TO ANDOVER

If traveling by car from Boston, take Route 93 north for about 19 miles. Take Exit 41, then turn right (east) on Route 125 for 2 miles. Turn right onto Route 28 and go north about 4 miles to the Andover campus. Turn right at the Bell Tower on the corner of Route 28 and Salem Street. The Admission Office is the first building on the right.

If driving from Logan Airport, follow the signs to Boston via the Sumner Tunnel and follow Route 93 north signs.

From Route 495 north or south take Exit 41A marked Andover and proceed south on Route 28 through the town of Andover. The Phillips Academy campus is approximately one mile south of the Andover center. Turn left on Salem Street, by the Bell Tower.

Merrimack Transportation Co. runs buses to Andover from the Transportation Building in Park Square, Boston. Visitors should call the bus terminal at (617)* 686-2777 for up-to-date information.



Inns and Motels in the Area

Andover Inn
Chapel Avenue
Andover
(617)* 475-5903

Hampton Inn
Rte. 114
Lawrence
(617)* 975-4050

Koala Inn
River Road
Andover
(617)* 685-6200

Marriott Hotel
123 Old River Rd.
Exit 45
Andover
(617)* 975-3600

Lowell Hilton
Lowell
(617)* 452-1200

Sheraton Rolling Green Motor
Inn
Lowell Street
Andover
(617)* 475-5400

Hedricks' Bed and Breakfast
(617)* 475-3698

**Note: as of 7/88, area code will change from (617) to (508)*



ANDOVER

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1989-90

Andover

Course of Study

Phillips Academy



Course of Study 1989-90

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Course of Study

The curriculum of Phillips Academy comprises a required core of studies believed to be fundamental to a liberal education and elective courses designed to fit the special needs and interests of the individual student. Placement in the year-level of a subject may be independent of a student's grade in school; through advanced placement at entrance or accelerated courses, many students fulfill requirements ahead of the normal year, thereby gaining increased opportunity for college-level or other elective courses. Instruction is given in all subjects usually required for entrance to higher institutions.

Classroom groups are small enough to permit individual attention, and students are placed in sections fitted to their skill level. Accelerated sequences and advanced courses offer particularly able and well-prepared students opportunity to progress at a rate commensurate with their ability and ambition. Most departments offer courses beyond the level of preparation for college.

For full membership in a given class, students should have credit for the work of the previous classes or its equivalent. However, students are rated as members of a given class if their deficiencies for full membership in it do not exceed a certain number of trimester courses.

Every student is assigned to an Academic Advisor, who helps in the selection of courses that will meet Andover's diploma requirements, college entrance requirements, and the student's particular interests. Students should familiarize themselves with the Academy's basic curriculum—both its requirements and its flexibility.

Members of the Upper Middle and Senior classes should become aware of the entrance requirements of the colleges they may wish to enter.

The Trimester Plan

The academic year is separated into three trimesters. There are two types of weekly class schedules: one during which classes meet only Monday

through Friday, and the other during which classes also meet on Saturday morning. There are roughly equal numbers of these five and six-day weeks in each trimester. Within a given week classes are scheduled to meet according to varying patterns: some for four forty-five minute periods; others for five such periods; and a few seminar and studio courses for two double-period blocks. Many departments offer yearlong courses as well as those which are term-contained (completed in one trimester). The diploma requirements are stated in terms of full-year courses or trimester courses, depending on the academic area involved.

Special courses in Foreign Languages

Special courses covering the work of two years in one are open to qualified Seniors in Chinese, German, Greek, Italian, Latin, Russian, and Spanish. These 10-20 courses are designed primarily for students of proven linguistic ability wishing to begin a second or third language in their Senior year, and therefore are not recommended for students of limited language ability. Entering Seniors with no previous foreign language experience must pass a 10-20 course as a diploma requirement.

Accelerated Sequences and Advanced Placement

The Andover curriculum offers accelerated sequences in most departments. It provides special programs in the modern foreign languages, designed to cover four years' work in three—or five years' work in four. The programs are open, on invitation of the departments, to especially able and ambitious students.

A large number of Phillips Academy students take College Board Advanced Placement Tests in May to establish advanced placement in college courses or credit toward the college degree.

Advanced Placement Examinations are offered in: American History, Art History, Art Studio, Biology, Chemistry, Computer Science (A & AB), Economics, English Language and Literature, European History, French Language & Literature,

German, Government & Politics, Latin, Math (AB & BC), Music Listening and Theory, Physics (B & C), Spanish Language & Literature.

Independent Projects

A Senior whose academic record satisfies specified criteria may apply for an Independent Project in lieu of a course. Granting an Independent Project requires the availability of a faculty mentor to supervise the project, a favorable evaluation of the merits of the proposal, and final decision by the Dean of Studies. At the conclusion of the project, the student receives a grade of Honors, Pass, or Fail.

Off-Campus Programs and Projects

The school offers several off-campus residential programs. The *Washington Intern Program*, in which Andover joins with Exeter, allows a group of Upper Middlers and Seniors to spend the Spring Term living together in Washington and working in the offices of U. S. Senators and Congressmen. (See the History section.)

Selected students enrolled in Spanish at the third level or higher may elect a residential Spring Term of study in Mexico, or a Winter Term in Barcelona, Spain, as part of an exchange program.

Selected students of French may participate in a Fall Term exchange in Paris, France, or may spend the Winter Term in Antibes, France, attending local schools and living with a family in the city.

There are also opportunities for students to spend a term living and studying in Germany, Italy, Peoples Republic of China, or the Soviet Union.

In addition to school-sponsored programs, the trimester plan provides an opportunity for individual Seniors to arrange off-campus projects related to their special interests. Development of such projects depends upon individual initiative in the investigation of opportunities and careful planning of a course of study that will meet diploma requirements and also free a block of time during the ap-

propriate term. Participation in any off-campus project or program must be approved by the Dean of Studies.

School Year Abroad

Students may elect to spend their Upper Middle or Senior Year studying in France or Spain with *School Year Abroad*, originated as an off-campus program by Andover, later joined as a sponsor by Exeter and St. Paul's. Students live with host families, while pursuing a course of study under the supervision of teachers from the three original sponsoring schools. Although *School Year Abroad* is now an independent program, it provides students with courses that earn full academic credit at Andover and with the experience of immersion in a foreign culture. Students wishing to participate should consult their Academic Advisor and the *School Year Abroad* office (located in Samuel Phillips Hall on the Phillips Academy campus) for guidance in the selection of courses for the years prior to and following the year abroad.

The Mountain School Program

The Mountain School Program of Milton Academy is a trimester-long program for eleventh graders which offers students the opportunity to enjoy a different living and learning experience on a 300 acre farm in Vermont. Phillips Academy students may participate Fall Term only. Students will continue their academic courses in addition to activities which will emphasize practical skills and crafts. Students will work on The Mountain School farm which supplies most of the food and heat for the school.

Summer Session

The Andover Summer Session is a six-week academic enrichment program for boys and girls of high school age. Students who wish to receive Phillips Academy credit for courses taken at the Andover Summer Session must receive prior approval from the chairman of the department involved.

Planning a Program of Studies at Andover

The following is designed to help Andover students and their parents to understand the curriculum, and to show the major decisions, and their consequences, which face students at each stage of the four-year academic program.

Workload

Students are normally expected to carry five courses each term. Uppers or Seniors who face an unusually demanding term are occasionally advised to cut back to four courses. Over the span of their last two years, students are required to complete at least 27 trimester units.

In most courses, especially those taken to meet diploma requirements, class time and homework together can be expected to require a total of about 9 hours per week. Certain upper-level elective courses, as noted in their descriptions, may require more than the standard 4 to 5 hours of homework per week.

Academic Advising

Each student has an Academic Advisor; this member of the faculty is expected to guide the student in shaping a well thought-out, long-term academic program which will incorporate both breadth and depth. In planning a program of studies, the student's needs and aspirations — insofar as they can be identified — are carefully considered, in addition to the necessity of meeting all of the diploma requirements. These needs may include college and career plans, strengths and weaknesses as revealed by previous performance and aptitude tests, and character and personal development.

The Advisor meets with the new student during the Orientation prior to the opening of school in September to review and approve the course selections which the student has made during the summer or spring. Subsequently the student meets with his or her Advisor midway through each term to make or confirm course selections for the up-

coming term and to review long-term plans.

In addition to the Academic Advisor, the House Counselor or Day Student Counselor must also approve the student's course selection for each trimester. From time to time during the academic year, the Counselor will report to parents concerning the student's growth and progress. Late in the spring students in the three lower classes and their respective Academic Advisors will prepare a selection of courses for the coming year; a copy of this selection will be mailed to parents in June. The Academic Advisor will welcome any information and suggestions that parents may wish to offer.

Diploma Requirements

The basic diploma requirement is the satisfactory completion of a four-year secondary school program, of which at least three trimesters must be at Andover; the student must be in good standing (not on Probation or under Suspension) at the time of graduation. A student who has been dismissed is ineligible for a diploma unless readmitted.

A student's required program normally includes nine trimester credits in a foreign language, eight in mathematics, three trimester credits in United States History, plus an additional trimester course in history taken at the Upper Middle or Senior level, a full-year course in a laboratory science, plus an additional three trimesters of science (for three and four-year members of the Class of 1990 the requirement is just the yearlong laboratory course), one trimester of art (usually *Visual Studies - Art 10*), one trimester of music (usually *The Nature of Music - Music 20*), and nine of English — these to include *English 10* (for ALL entering Juniors), a yearlong course of competence in writing and reading and a three-trimester sequence of general literature. In order to be eligible for a diploma all students must satisfy the swim requirement of the Department of Athletics. Certain diploma requirements vary with the class level at which the student enters Phillips Academy. Entering Juniors and Lower Middlers must pass *Physical Education 10* in addition to required athletics; all three and

four-year students must pass, prior to graduation, a one-trimester course offered by the Department of Philosophy and Religious Studies. Entering Upper Middlers need pass only one trimester of either art or music at the Academy. Entering Seniors are not required to take either art or music. Some modifications of the language requirement are made for entering Upper Middlers and Seniors. Entering Seniors with no previous foreign language experience must pass a 10-20 course in a foreign language. A Senior must *earn* a minimum of twelve graded trimester credits during the Senior year. Seniors must have passing trimester grades for all courses taken during their Spring Trimester. Independent Projects are counted as graded courses.

Credits (trimester) required for the diploma are:

For Entering Juniors 54

For Entering Lowers 51

For Entering Uppers 48

For Entering Seniors 48

Newly Admitted Students

Students entering for their first year are sent placement material, including some forms for present teachers to complete and a self-administered diagnostic test in elementary algebra. These items are used by the Academy to aid in proper placement or recommendation of course levels. New students are also asked to complete to the best of their ability a Course Selection form, indicating the courses that they wish to take during the coming year. Although the placement material may alter somewhat a student's preliminary selections, it is helpful, for planning purposes, to know the levels that each student thinks he or she is ready to enter.

The Main Choices at Each Stage of a Four-Year Program

While a student's program of studies is adapted each year to his changing situation, the *future consequences* of each course should be noted, for certain choices in one year open the way to later options and may close the door to others.

Academic Program Guidelines

In order to promote both breadth and depth in students' academic programs, the Faculty has voted the following guidelines, which are in addition to the Diploma Requirements listed above. These represent what the Faculty *strongly urges* students to do. The Academic Advisors recognize that there will always be some acceptable student programs which do not follow these guidelines.

All Juniors and Lowers should take English, mathematics, and foreign language every term.

By the end of Lower year each four-year student should have taken some history and some science.

By the end of Lower year each four-year student should have taken *Art 10* or *Art 11*.

All Uppers should take English all year.

In their Upper and Senior years students should take a total of at least four trimesters of mathematics and science, with at least one trimester in each of these two areas.

All Seniors should take, during each term, a course in which they do some writing in the English language.

All three-and four-year students will be advised to take more than the minimum diploma requirements in the arts (Art, Music, Theatre and Dance).

JUNIOR YEAR

Each trimester a Junior must take five courses. Students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the spring.

In selecting courses, students are reminded to check the diploma requirements. A Junior's program should resemble the following outline:

1. Math—enter the sequence by placement of the department;
2. Foreign Language—begin sequence (usually a yearlong course at the 10-level);
3. English—*English 100*

- | | |
|-------------|--|
| 4. Elective | [Art, Classics, Computer, History,
another Language, Music, Physical
Education, RelPhil, Science, Study
Skills, Theatre.] |
| 5. Elective | |

LOWER MIDDLE YEAR

Each trimester a Lower Middler must take five courses. New students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the Spring. A few students take the CEEB Achievement Tests during the Lower Middle year. In selecting courses, students are reminded to check the diploma requirements. A Lower's program should resemble the following outline:

New Students

1. Math—(usually *Mathematics 19* or *Mathematics 21*);
2. Foreign Language—enter the sequence by placement of the department;
3. English—enter sequence (*English 200*);
4. Elective [Art, Classics, Computer, History,
5. Elective [another Math, another Language,
Music, Physical Education, RelPhil
Science, Study Skills, Theatre.]

Returning Students

1. Math—continue the sequence (*Mathematics 21, 22, 32*);
2. Foreign Language—continue the sequence;
3. English—continue sequence (*English 200*);
4. Elective [Art, Classics, Computer, History,
another Math, another Language,
Music, Physical Education, RelPhil,
Science, Study Skills, Theatre.]

Students wishing to participate in the *School Year Abroad Program* during their Upper Middle year should discuss these plans with their Academic Advisor and seek guidance for the selection of courses for the Lower Middle Year. Participation in any off-campus project or program must be approved by the Dean of Studies.

UPPER MIDDLE YEAR

During the Upper Middle and the Senior Years, a student must accumulate a total of 27 trimester units in blocks of four or five courses per trimester. A Pass/Fail course may be elected as a fifth course only.

New students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the spring. Uppers should take the Preliminary Scholastic Aptitude Tests (PSAT) in the fall; all take the CEEB Scholastic Aptitude Tests in January; and many take the CEEB Achievement Tests in the June of their Upper Middle year. Some also take the CEEB Advanced Placement Tests in June of their Upper Middle Year. As a matter of general policy Academic Advisors encourage "depth" in the selection of courses for the Upper Middle Year. In selecting courses students are reminded to check the diploma requirements. An Upper's program should resemble the following outline:

New Students

1. Math—enter the sequence by placement of the department;
2. Foreign Language—enter the sequence by placement of the department;
3. English—begin sequence (*English 250*);
4. Elective [Art, Computer, History, another
5. Elective [Math, another Language, Music,
RelPhil, Science, Study Skills,
Psychology, Theatre.]

Returning Students

1. Math—continue the sequence (usually *Mathematics 34, 35, 36*);
2. Foreign Language—continue the sequence;
3. English—continue the sequence (*English 300, 310*);
4. History—usually *History 30 (T2)*, *31 (The United States)*;
5. Elective [Art, Computer, another English,
History, another Math, another
Language, Music, RelPhil, Science,
Study Skills, Psychology, Theatre.]

Participation in any off-campus project or program must be approved by the Dean of Studies.

SENIOR YEAR

During the Upper Middle Year and the Senior Year, a student must accumulate a total of 27 trimester units in blocks of four or five courses per trimester. A Pass/Fail course may be elected only as a fifth course; however, an Independent Project, though marked on a Pass/Fail basis, is counted as a graded course.

A Senior must *earn* a minimum of twelve graded trimester credits during the Senior Year. Seniors must have passing trimester grades for all courses taken during their Spring Trimester. Many Seniors retake the CEEB Scholastic Aptitude Tests in November and the CEEB Achievement Tests in December, and take the CEEB Advanced Placement Tests in May. In selecting courses students are reminded to check the diploma requirements. A Senior's program should resemble the following outline:

New Students

1. Math—enter the sequence by placement of the department; if the requirement is not yet satisfied enter *Mathematics 40*;
2. Foreign Language—enter the sequence by placement of the department if the requirement is not satisfied;
3. English—usually *English 350-12*;
4. Elective [Art, Computer, another English,]
5. Elective [History, another Math, a 10-20
Language, Music, RelPhil, Science,
Study Skills, Psychology, Theatre.]

Returning Students

Usually most diploma requirements have been satisfied. Careful selection of electives for continued depth in the student's chosen areas is encouraged. Two-year students take *English 310* in the fall, and electives at the 400 and 500 level in the winter and spring.

Transferring and Dropping Courses

To transfer or drop a course, a student must obtain an official transfer slip from his or her Academic Advisor. This slip is then taken *as soon as possible* to the Scheduling Officer in George Washington Hall. Transfers into term-contained courses must take place during the first six calendar class days of the term. No course may be dropped after the end of the fourth week of classes of any term. Students wishing to drop yearlong or T2 courses prior to the normal end of the course, and after the first six calendar class days of the course, may do so only by gaining the approval of a group of five: the Department Chairman, the Dean of Studies, the student's House Counselor, Academic Advisor, and Instructor. Credit is granted at the discretion of the Department Chairman and only if the student is passing the course at the time it is dropped and only for that portion completed. Yearlong and T2 courses are considered to be long-term commitments.

Attendance

Students are expected to attend all academic classes. Instructors, if approached in advance, are permitted (but not required) to excuse students from a class meeting if the absence from that meeting will not add to weekend time. Only Cluster Deans may give permission to extend weekend time, and they may do so without consulting Instructors.

Failed Courses

In most cases, continuing students may attempt to receive credit for a failed course by taking a make-up examination. Spring Term Senior Failures may be made up only following Commencement.

Computer Center

A computer center, located in the lower level of the Oliver Wendell Holmes Library, is available for student use. It houses two computer classrooms and a third lab filled with an array of Macintosh, Apple IIe and Zenith (IBM compatible) computers. The center is open during the regular operating

hours of the library. A wide range of software is available, and instruction in computer usage is provided.

Personal Computers

Though there is no expectation that they do so, students are permitted to bring personal computers to the School and keep them in dormitory rooms (providing the monitor may not also be used as a television receiver). However, Phillips Academy can assume no responsibility for the care, security, or maintenance of these student-owned units. Further information concerning personal computers is available, upon request, from the director of the Computer Center.

College Entrance Examination Board Test Dates

Tests will be held on campus in 1989-90 as follows:

October 24	PSAT/NMSQT (<i>Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test</i>)
November 4	SAT/ACH
December 2	SAT/ACH
January 27	SAT/ACH
May 5	SAT/ACH
June 2	SAT/ACH
May 7-18	AP (<i>Advanced Placement Examinations</i>)

Course Enrollments and Cancellations

The School reserves the right to cancel, at any time up to the 3rd day of classes, any advertised course where enrollment is judged to be unacceptably small. Likewise, the School has the right to restrict enrollment in any course when sign-ups exceed the departmentally determined course capacity.

Key to Course Designation

A course number ending in "0" denotes a yearlong course (Example: *Math 10-0*). A number ending "123" indicates that the course is term-contained, but sequential, and may be taken for one, two, or

three terms (Example: *Art 26-123*). A number ending in a single digit "1", "2", or "3" indicates a course that is term-contained, but one that may be taken only once (Example: *Music 20-2*). The designations 1, 2, and 3 indicate the trimester during which the course is offered: 1 = Fall; 2 = Winter; 3 = Spring. Some courses require a two-term commitment; they are indicated by a "(T2)" following the course name (Example: *Physics 52-12 Advanced Physics (T2)*). Check carefully each course description for any other limitations: Prerequisites, permission of instructor or department chairman required, etc.

Immediately below each course number is a 4-digit number in parentheses. This identification number (often referred to as the "computer number") is used for data-processing files and is required when a student registers for courses. The final digit of the computer number has roughly the same meaning as the last digit of the course number:

Final Digit: Indicates:

- | | |
|---|--|
| 0 | Yearlong course |
| 1 | Course offered in Fall Trimester |
| 2 | Course offered in Winter Trimester |
| 3 | Course offered in Spring Trimester |
| 4 | T2 course offered in Fall and Winter |
| 5 | T2 course offered in Winter and Spring |

Course Descriptions

Art

The diploma requirement in Art is as follows: entering Juniors and Lowers must take a trimester course in a Studio Art; an entering Upper must take a trimester course in a Studio Art or Music at the Academy; neither a Pass/Fail course nor an Art History Course is accepted as fulfilling the requirement. The basic course, *Visual Studies*, covers a broad range of material, is open to students of all abilities and experience, and is a prerequisite to al-

most all elective courses in Art. Exemption from this **prerequisite** is granted only on the basis of a portfolio of work judged satisfactory by the Chairman of the Department in collaboration with the teacher of the course which the student desires to enter. An acceptable portfolio should contain examples of two-dimensional work, three-dimensional work (slides or photographs are acceptable), and photography.

The College Entrance Examination Board offers students the opportunity to gain Advanced Placement in Studio Art in many colleges and Art Schools, thus enabling a student to by-pass basic design courses. Students must submit a portfolio of slides and original work to Princeton in May. Students interested in Advanced Placement should enroll in *Art 315-1* and two subsequent terms in Art.

Students wishing to apply for an independent project in photography will not be eligible until they have taken *Art 12*, *Art 26*, and two terms of *Art 306*.

With the exception of *Art 40* and *41*, no Art course, if failed, can be made up by examination.

Students should expect to help pay for art materials. Cameras are available for loan to scholarship students taking photography.

INTRODUCTORY STUDIO COURSES

10—1	(0101)	Visual Studies
10—2	(0102)	
10—3	(0103)	

Five prepared class periods. Not recommended for Juniors. In its emphasis on visual observation, interpretation, and organization, the basic course is designed to provide an understanding of how visual information is made and transmitted. Along with discussion of design problems, the student receives experience in photography, drawing, two-dimensional design, and three-dimensional construction. Previous experience in art is not required.

11—12	(0114)	Visual Studies for Juniors (T2)
11—23	(0115)	(a two-term commitment)

Four prepared periods. Strongly recommended for Juniors. This course introduces students to the language of vision through drawing, photography, video, color, structure, and two- and three-dimensional design. Studio projects are coordinated with visits to the Addison

Gallery where students study original works of art that instruct and clarify their own art making activity. The course will fulfill the diploma requirement in art and will serve as the equivalent of Art 10 as a prerequisite for other Art courses.

16—12	(0164)	Extended Visual Studies (T2)
		(a two-term commitment)

In addition to the material covered in Art 10, this course includes video, art history, and 3-D design, with projects in woodworking and welding. Besides fulfilling the diploma requirement, it is the preferred prerequisite and expanded foundation for students intending to continue in advanced studio courses. Not open to juniors.

12—1	(0121)	Introductory Photography
12—2	(0122)	
12—3	(0123)	

Prerequisite: Visual Studies (Art 10, 11 or 16). An introduction to basic out-of-doors photography, the course covers fundamentals of exposure, developing and print-making. A camera (35 mm. or 2 1/4) with manually controlled speed, aperture and focus is required; a light meter is not necessary. (Scholarship students may borrow cameras from the school.) Emphasis is on both darkroom technique and aesthetic quality. This course may be bypassed by students with previous experience through the presentation of a portfolio. Classes meet twice a week with six hours of preparation and weekly conferences with the teacher.

14—1	(0141)	Introductory Ceramics
14—2	(0142)	
14—3	(0143)	

Four classes per week plus evening studios. Basic techniques of hand-building, wheel-throwing, and glazing. Emphasis on the sculptural as well as the functional possibilities of clay. At least one raku firing each term, or a similar special project. No prerequisites, and does not fulfill the diploma requirement.

INTERMEDIATE STUDIO COURSES

Unless otherwise noted, the intermediate courses consist of four prepared classes each week. *Visual Studies* (Art 10, 11, or 16) is a prerequisite for all intermediate courses. Any of these courses may be taken more than once to increase proficiency, as the courses are designed to deal with individual needs.

20—1	(0201)	Drawing and Two-Dimensional Design
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Prerequisite: Visual Studies (Art 10, 11, or 16). A course designed to develop drawing and two-dimensional composition skills. Drawing includes: life drawing, still life,

and mono-printing. Two-dimensional design will deal with the organization of representational images, color, painting and collage. Continuation in Drawing (Art 20-23) or Two Dimensional Design (Art 23-23) in Winter or Spring is recommended.

20—23 (0202) Drawing (0203)

Prerequisite: Visual Studies (Art 10, 11, or 16). A course designed to develop observation and drawing skills in several media, based on the assumption that drawing is an end in itself as well as a skill basic to other media. Included: one life-drawing session each week.

23—23 (0232) Two-Dimensional Design (0233)

Prerequisite: Visual Studies (Art 10, 11, or 16). The course deals with one's ability to manipulate those elements most associated with the picture plane: color, line, shape, texture, and composition of flat materials. Work includes: 1) color—free studies and collages dealing with the structural and expressive nature of color; 2) drawing—exercises using pencil, pen, and brush, figure and landscape drawing; and 3) figure-ground—expanding the structural and illusionary aspects of figure-ground as an end in itself and as a basis for graphic and advertising design. (Mr. Shertzer)

24—23 (0245) Three-Dimensional Design (T2) (a two-term commitment)

Prerequisite: Visual Studies (Art 10, 11, or 16). This course identifies some basic areas of concern—equilibrium, economy, function, scale—within an ecological frame of reference. Studio problems in design and construction will draw on the student's ability to learn and apply problem-solving techniques creatively; discussion and written exercises will ask the student to think about design as it defines the human enterprise. An introductory course in physics, chemistry or biology, taken previously or concurrently, will be helpful. (Mr. Lloyd)

25—13 (0251) Artists' Books (0253)

Prerequisite: Visual Studies (Art, 10, 11, or 16). Through an exploration of calligraphy or photoillustration, paper-making and bookbinding, students may turn their thoughts, feelings and dreams into book format. Initial projects will be assigned to encourage experimentation, technique and problem solving. Group critiques as well as an exploration of the historical roots of book arts and photography are integral parts of this course. (Ms. McCarthy and Mrs. Quattlebaum)

26—123 (0261) Continuing Photography (0262) (0263)

Prerequisite: Art 12. An extension of Introductory Photography, the course goes deeper into technical proficiency

and aesthetic quality. Technical aspects include metering techniques, black and white filters, exposure and printing contrast controls, various developing styles and darkroom deviations. A camera and light meter are required. The student will be exposed to the works of various photographers so that he may gain a better sense of his own photographic style and identity. Classes meet twice a week with six hours of preparation and weekly conferences with the teacher.

27—13 (0271) Animation (0273)

Prerequisite: Visual Studies (Art 10, 11, or 16). An introduction to the art of illusion of motion through shooting still images frame by frame with 8mm sound motion picture film, with emphasis on making a very concise and carefully planned statement. Students may work in computer animation. (Mr. McMurray)

HISTORY OF ART COURSES

40—1 (0401) History of Art: Painting and Sculpture
Four prepared class periods. For Uppers and Seniors. Although a survey of Western Art from the cave painter to contemporary, the course examines four present-day directions by studying the historical styles as roots leading up to our time, with an emphasis on the 20th Century. (Mr. Bensley)

41—2 (0412) History of Art: Architecture
Four prepared class periods. For Uppers and Seniors. A survey of architecture and engineering from priestly civilizations to the present, the course emphasizes the architectural style as an expressive outgrowth of the culture that produced it. Combined with Art 40-1, this course should prepare students for the Advanced Placement Examination in Art History. (Mr. Bensley)

42—3 (0423) The American Renaissance: American Art 1876-1917

Open to all students. Prerequisite: Art 40 or Art 41, or permission of the instructor. A survey of American art produced between the Centennial Celebration of 1876 and World War I. The course will make extensive use of the Addison's collection, which is rich in this important period in American art. Discussion of art of the mid-century landscape traditions will serve as background for examination of such topics as the American Renaissance, Aestheticism, American Impressionism, and Social Realism. Artists and their work will be discussed within the historical, social, and cultural context that produced them. Lectures and class discussions will be coordinated with close study of works in the Addison's collection. (Ms. Faxon)

ADVANCED STUDIO COURSES

Visual Studies (Art 10, 11, or 16) is a **prerequisite** for all advanced courses. These courses may be taken more than once. Unless otherwise noted, Advanced Studio courses meet two double periods a week with four more hours required in the studio.

300—123 (0701) **Graphics and Photography**
(0702)
(0703)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. Applying photography to graphic arts, particularly through photo-silkscreen, photo-etching, computer graphics, and photolithography. Individual experimentation is emphasized in an attempt to carry the expressive force of photography beyond darkroom techniques. (Mr. McMurray)

302—123 (0721) **Painting**
(0722)
(0723)

Prerequisite: *Visual Studies (Art 10, 11 or 16)*. An introduction to the basic elements and techniques of painting in oils. Specific problems are assigned to study the fundamentals of color, composition and space in painting, as well as to encourage the student's individual expression. Class critiques and discussions, slides, reproductions, and occasional field trips (depending on enrollment) are also part of the course. Previous experience is helpful but not necessary; students are encouraged to sign up for the full year if possible. (Ms. Spatz-Rabinowitz)

303—123 (0731) **Filmmaking**
(0732)
(0733)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. This course combines viewing theatrical, documentary, and art films for discussion and criticism with the production of individual and group projects using super-8 film and/or video equipment. Course work will include developing film ideas, script-writing, shooting, editing and class critiques. (Mr. Sheldon)

304—123 (0731) **Advanced Ceramics**
(0741)
(0742)
(0743)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. For those who are seriously interested in the total operation from design to execution. Hand-building, wheel-throwing, glazemaking (and some chemical analysis), responsibility for loading and firing electric, gas, raku, and salt kilns. Assigned reading and occasional field trips. Previous experience in clay is desirable. (Mrs. Bensley)

305—23 (0752) **Graphics: Computer or**
(0753) **Printmaking**

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. In the Winter Term this course will explore the major areas in the field of computer graphics: 2-D paint systems, 3-D graphics, and applications mixing photography, drawing, video and print with computer-generated and/or manipulated images. A series of small projects will cover the basics in each area. One major project follows, utilizing workstations which have image digitizing capacities and can output to slides, paper or video. Programming skills are not necessary, but students with programming experience will be encouraged to use it in accomplishing their final project.

In the Spring Term the course aims to give a student knowledge of different drawing techniques using printmaking media. If they wish, students can use computer generated images in their work. Students work with metal plate etching and dry point, collagraph and plate lithography. Printmaking allows students to see the successive conceptual stages an artist goes through in developing an image and encourages them to look at the many possible forms their images could take rather than focusing on one final product. (Ms. Veenema)

Advanced Photography

306-I—1 (0761) **Photojournalism**

Prerequisite: *Continuing Photography (Art 26)*. A photograph is a multi-dimensional experience. It can serve to recall persons or events; it can inform, inspire, and raise questions. It is a way of sharing an experience and one's relationship to it. The subject of this course is taking photographs that are deeply and personally felt and which, at the same time, can communicate to a wide audience. The commentary and images of several celebrated photographers will be presented for discussion. Projects will include individual photographs, essays, picture stories, journals, biographies, etc. While independent work is expected, some assignments will be given. (Mr. Wicks)

306-II—3 (0773) **Photo-Manipulations**

Prerequisite: *Continuing Photography (Art 26)*. In this course students will learn to increase the range and expressive potential of their photographs through a variety of darkroom manipulations and techniques, including multiple exposure, solarization, hand-coloring, toning and collage. Ideas involving words and photographs as well as sequencing of photographs will be discussed. The class will be conducted in seminar fashion, each student undertaking a term-long project of his or her own choosing. Class critiques will be regularly scheduled. (Ms. McCarthy)

306-III—2 (0782) **Studio Photography**

Prerequisite: *Continuing Photography (Art 26)*. Concentrating on portraiture and fashion photography, studio

strobes are used to achieve controlled lighting. Through various darkroom techniques and manipulation, along with individual experimentation, an attempt will be made to express personal ideas. Utilizing professional models from Boston agencies, the course is an introduction to commercial photography. (Mr. Bensley)

308—123 (0881) **Sculpture**
(0882)
(0883)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. Offers an opportunity to work in practically every material available to the sculptor today, including wood, stone, metal, plastics, plaster, and others. It is therefore possible for students to develop into sculpture concepts discovered in *Visual Studies (Art 10)* or *Three-Dimensional Design (Art 24)* as well as ideas drawn from their own experience. Some outstanding work of recent classes includes the "avocado" by Seymour House '73, a thirty-foot welded construction which is now a permanent addition to the Underwood courtyard. Individual criticism is stressed. (Mr. Shertzer)

309—3 (0893) **Kinetics**

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. A search for the aesthetics of movement. Individual inventiveness is stressed as students pursue projects directed toward devices that produce implied or real motion. Self-perpetuated problem-solving situations become one of the prime values and objectives of the course. Projects range from simple mobiles and mechanical sculptures to computer graphics. (Mr. McMurray)

310—123 (0901) **Architecture**
(0902)
(0903)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. For Uppers and Seniors. *Three-Dimensional Design (Art 24)* recommended, but not required. The design of structures for human habitation involves a variety of basic considerations. In the fall, the course will concentrate on functional analysis of sheltered spaces and their organization. The winter term will survey methods of enclosing spaces at different scales and construction techniques, including some architectural detailing. The spring term will combine knowledge gained in the previous terms in a project or projects simulating the experience of architectural practice. The course fills the needs of students who are considering architecture as a field of concentration as well as of those who desire familiarity with the basics of environmental design. Although students are encouraged to take the course for three terms, each segment is planned to accommodate enrollment for that term alone. (Mr. Lloyd)

311—3 (0913) **Contemporary Communications**
Four prepared class periods. The course examines some of the bases of communication between and among peo-

ple. Material includes fiction, non-fiction, poetry, drama, motion pictures, and the visual arts. **Prerequisites:** Successful completion of a course in art, music, or theatre. The course engages in group projects aimed at public presentation. (Mr. Owen, Mr. Lloyd)

315—1 (0951) **Advanced Placement in Studio Art**
Prerequisite: *Visual Studies (Art 10, 11, or 16)* and two art courses. For Seniors who have taken at least two art courses beyond Visual Studies. This course is a seminar run via weekly critique sessions with instructor, and in which each student is expected to do at least nine hours of outside, independent work in preparation of her or his portfolio for Advanced Placement or for other use. A student enrolled in this course should plan to take at least one art course or project in Winter and Spring Terms. (Ms. Veenema)

Classical Studies

The Department of Classics offers the following courses in Classical Studies designed to provide Andover students a broad introduction to Classical Civilization through history, literature, mythology, and etymology. All courses are electives, open to the various classes as noted. The courses offered here require no knowledge of Greek or Latin. Courses in the Greek and Latin languages offered by the Department of Classics are described under Foreign Languages. For another course in Ancient History see *History 55—123*.

21—1 (5321) **Classical Civilization: Greece**
21—3 (5323)

Four prepared class periods. For Juniors and Lower Middlers. The course surveys the achievements of the ancient Greeks from Homeric times through Alexander the Great, including their impact on later civilizations in such areas as literature, art, philosophy, drama, government and science.

22—2 (5332) **Classical Civilization: Rome**
Four prepared class periods. For Juniors and Lower Middlers. The course introduces students to the civilization of Rome which dominated the Western World politically for a thousand years and culturally for even longer. The developing concepts of politics, law, and empire as we know them today are discussed. The course challenges the students to consider the meaning of the Roman experience in its glorious achievement of the "Roman Peace" as well as in its "Decline and Fall."

31—1 (5411)

31—2 (5412)

31—3 (5413)

Etymology

Four prepared class periods. For all classes. Training in the interpretation of English words by systematic analysis of elements derived from Greek, Latin and other Indo-European languages. Exercises expand vocabulary and develop precision of expression and understanding.

32—1 (5421)

32—2 (5422)

Greek Literature

Four prepared class periods. Open to all classes. A systematic study of the masterpieces of early European civilization as seen in their proper literary, intellectual, and historical context. In what is essentially a history of ideas, the major *genres* of epic, tragedy, comedy, satire, history, erotic poetry, and philosophy are stressed as aspects of the wider evolution of European thought. The major problems which still confront human life are explored through the writings of Homer, Aeschylus, Sophocles, Euripides, Herodotus, Thucydides, Aristophanes, Plato and others. (Dr. Pottle)

33—2 (5432)

33—3 (5433)

Classical Mythology

Four prepared class periods. Open to all classes. The interest of the Twentieth Century in Classical Mythology has stemmed from three main sources: the psychoanalytical use of myth, progress in the field of classical archaeology, and anthropological study of myth. Preliminary exploration of the works of Freud in psychology, Schliemann and Evans in archaeology, and Frazer, Graves, and Levi-Strauss in anthropology leads to the detailed study of the myths of Oedipus, Theseus, and Agamemnon among others. The myths are considered living entities changing in the hands of each artist who deals with them whether it be Homer or Joyce, Aeschylus or O'Neill, an anonymous Greek vase painter or Dali, Euripides or Strauss. Works of literature, art, and music provide the core for the study of the use of myth in human life. (Mr. Krumpe)

English

The diploma requirements in English are to establish competence in writing and reading. For new Lowers, this requirement is fulfilled by successful completion of *English 200*, *English 300*, and *English 310*. New Uppers fulfill their requirement by successful completion of *English 250*, *English 310*, and two terms of English electives. One year Seniors must take *English 350* and one term of an English

elective. (One year Seniors and post-graduates are interviewed by the Department Chair before the start of school and in some cases these students may be exempted from *English 350* to enroll in three terms of a 400 or 500 level English course.) Students entering the Junior class must take *English 100*. Juniors may not enroll in *English 200*.

The English Department also offers specialized courses for students who have already passed their requirements and elect to continue studying English. Related courses, whose prerequisites vary, are listed elsewhere in this booklet: e.g., under Performing Arts, Interdisciplinary Courses, Classics Courses, and Modern Foreign Language Courses in translation. *All English courses meet for four prepared classes a week, unless the course description states otherwise. No failed course may be made up simply by passing a make-up examination.*

100—0 (1100) English: The Myth and the Journey
(Formerly *English 10*)

This course is required for all Juniors. As a foundation for *English 200* and *300*, the course studies a variety of literary forms and styles. Frequent writing assignments, close reading of such texts as *The Odyssey*, *Great Expectations*, *Black Boy*, *The Tempest*, and regular work with journal entries prepare the student for successful completion of the English requirements.

Juniors are also eligible to enroll in Etymology, which is described under Classics.

200—0 (1200)**Competence**

The course in reading and writing uses a varied selection of short works from *The Competence Handbook*, anthologies, and the students' writing as the primary texts. The first term emphasizes paragraph coherence and basic skills through the writing of short compositions, expressive and expository; the second term focuses on clear and concise multi-paragraph essays and a documented inquiry that encourages the acquisition of important reading skills in conjunction with learning to write a paper in the Humanities. The third term includes close and accurate reading of the poem, the short story, and the short novel by having students write about point of view, characterization, tone, organization, diction, theme. Throughout the year we assume that reading and writing are activities and that the teacher's function is to help the student understand and perform these activities through practice, comment, and revision. The criteria for grading are the successful completion of assignments, the degree of improvement, and the quality of the

work. Designed to teach students to read as writers and write as readers, successful completion of *English 200* prepares students for the literature sequence and the specialized courses.

250—0 (1250) Competence/Literature Sequence for Uppers

A condensed version of *English 200* and *English 300*. Required of all new Uppers. Students completing this course take *English 310-1* in the fall.

300—12 (1304) The Seasons of Literature (T2)
(a two-term commitment) (formerly *Lit B*)

English 300 continues *English 200*'s movement toward literary analysis, developing critical skills through the study of novels, poetry, drama, and sometimes, film. The course provides a sense of literary mode; of historical perspective; of mythic, psychological, and cultural contexts, aiming at the development of a literary sensibility. While emphasizing the analytical — both the close reading of texts and focused writing that asserts a thesis and supports its points with extensive textual evidence — the course also encourages open discussion and more experimental forms of expression, such as journals, narratives, role-plays, parodies. The structure of the course is inspired by, but not governed by Northrop Frye's cyclical scheme of literature: tragedy (fall), irony (winter), comedy (spring), romance (summer). The first term pairs tragedy and romance, while the second term pairs comedy and irony, for balance through the separate terms. *Oedipus Rex* is required reading in the first term and *The Adventures of Huckleberry Finn* in the second; other works are selected by individual instructors from departmental lists covering the pre-Romantic, Romantic/post-Romantic, and modern periods (excerpted below), so that each period is represented in each term. Additional works (not necessarily from the departmental lists) are assigned by the various instructors. Approximately one-third of the reading is devoted to poetry, and substantial attention is given to women and ethnic writers. There is a departmental exam. **Prerequisite:** *English 200*.

Tragedy and Romance — *Pre-Romantic*: Selections from the *Bible* (e.g. Genesis, Job, the gospels); a play by Aeschylus; *Metamorphoses*, Ovid; *Beowulf*; *Everypman*; *The Spanish Tragedy*, Kyd; *Dr. Faustus*, Marlowe; *The Changeling*, Middleton; *The White Devil*, Webster; selections from *Paradise Lost*, Milton; poems by Spenser, Jonson, Donne, Herbert, Marvell; *Phedre*, Racine; tales collected by the Grimms.

Romantic/Post-Romantic: *Rime of the Ancient Mariner*, Coleridge; *Eve of St. Agnes*, Keats; *Frankenstein*, Shelley; *Wuthering Heights*, Bronte; short stories by Poe; *The Scarlet Letter*, short stories, Hawthorne; *Billy Budd*, *Moby Dick*, Melville; a play by Ibsen; a novel by Hardy; *Daisy Miller*, James; poems by Wordsworth, Shelley, Keats, Tennyson, Whitman, Dickinson.

Modern: *Heart of Darkness* Conrad; *House of Mirth*,

Ethan Frome, Wharton; *The Fountain Overflows*, West; *The Great Gatsby*, short stories, Fitzgerald; *The Sun Also Rises*, *Farewell to Arms*, short stories, Hemingway; *The Iceman Cometh*, *Long Day's Journey into Night*, O'Neill; *The Bear*, short stories by Faulkner; *Antigone*, Anouilh; *Native Son*, Wright; *Invisible Man*, Ellison; *Seize the Day*, Bellow; *The Fixer*, Malamud; *Wise Blood*, short stories, O'Connor; *Death of a Salesman*, Miller; *The Dutchman*, Jones; *House Made of Dawn*, Momaday; *Sula*, Song of Solomon, Morrison; *Book of Common Prayer*, Didion; *Love Medicine*, Erdrich; poems by Yeats, Eliot, Hughes, Berryman, Lowell, Brooks; a work by Cather, Steinbeck, Welty, McCullers, Baldwin; stories by LeGuin; plays by Fugard, August Wilson.

Comedy and Irony — *Pre-Romantic*: Works by Horace, Juvenal; selections from *Canterbury Tales*, Chaucer; *Volpone*, Jonson; poems by Donne, Herbert, Marvell; a play by Moliere; selections from Dryden, Pope; *The Country Wife*, Wycherly; *Gulliver's Travels*, "A Modest Proposal", Swift; *Candide*, Voltaire.

Romantic/Post-Romantic: *Pride and Prejudice* Austen, *Don Juan*, Byron; *David Copperfield*, *Hard Times*, Dickens; *Moby Dick*, Melville; poems by Browning; *Alice in Wonderland*, Carroll; *The Importance of Being Earnest*, *The Picture of Dorian Gray*, Wilde.

Modern: A play by Shaw; *Age of Innocence*, Wharton, *Decline and Fall*, *A Handful of Dust*, *The Loved One*, Waugh; 1984, *Animal Farm*, Orwell; *Call It Sleep*, Roth; *Invisible Man*, Ellison; *Cat's Cradle*, *Slaughterhouse-Five*, Vonnegut; *Grendel*, Gardner; *Transformations*, Sexton; poems by Eliot, Auden, Cummings, Owen, Eberhart, Plath, Sexton; works by Nabokov, Malamud, Bellow, Roth, Cheever, Updike, Davies, Reed, Wolfe, Allen.

310—1 (1311) Shakespeare (formerly *Lit C*)

310—3 (1313)
An introduction to the study of Shakespeare. At least three plays will be read, one being *Hamlet*, with an emphasis upon close textual analysis. **Prerequisite:** *English 250-0* or *English 300-12*.

350—12 (1351) English (formerly *English 300*)
(1352)

A special course for all post-graduates, and one year Seniors. Its purpose is to provide the writing and reading skills taught in *English 200* as well as to expose students to substantial works of literature. While reading plays, poetry, short stories, or novels, students undertake intensive writing exercises and learn to write effective papers of greater length. (Mr. McGraw, Mr. Price)

351—12 (1361) English
(1362)

A special course, similar to *English 350*, but primarily for students for whom English is a second language. (Ms. Graham)

SPECIALIZED COURSES

Specialized Courses are open to students who have successfully completed *English 200, 300 and 310*. Courses numbered in the 500s are more intensive and demanding than those numbered in the 400s and may require more than the standard 4 to 5 hours per week of homework. Each course has four prepared class periods a week, unless specifically stated otherwise. Only courses with sufficient enrollment will be given.

401—123 (1411) Non-Fiction Writing
(1412)
(1413)

In this course writers will gain practice in these non-fiction modes: personal essay, analysis, argument, feature writing, and extended composition. There are daily writing assignments; class work focuses on student editing. The instructors assume that students entering the course write with grammatical and rhetorical competence. Students are encouraged to submit their work for publication in newspapers and magazines. (Mr. Gould)

403—123 (1431) Introduction to Writing
(1432)
(1433)

An introductory course to the writing of original stories, informal essays, and poetry. While examining examples of the genres mentioned, the student tries all these forms. With written permission from the department chairman, a student may take this course before he has completed the normal Competence-Literature sequence. (Mr. Owen)

405—123 (1451) Literature of Two Faces
(1452)
(1453)

The relationship between American and minority cultures. The course addresses one or two cultures in any given term. The instructors hope to introduce students to the myth, magic and hard realities of ethnic experience in this country. Authors students might read include Flannery O'Connor, James Baldwin, Gwendolyn Brooks, Leslie Marmon Silko, William Faulkner, June Jordan, N. Scott Momaday, Isaac Bashevis Singer, Sonia Sanchez, Imamu Amiri Baraka and Maxine Hong Kingston. (Ms. Moss, Mr. Thorn)

407—123 (1471) Topics in English Literature
(1472)
(1473)

Explores the diversity of English literature from Beowulf and medieval writers to James Joyce, Virginia Woolf, William Butler Yeats, and later moderns. Readings enable students to explore issue of self, society, and the uni-

verse that characterize different eras and that enlarge understanding of our literary tradition. Topics include English Comedy from Chaucer to Monty Python, the English Novel, the Literature of British Imperialism, Mythic Systems in British Writers and English Comic Theater.

408—123 (1481) American Writers
(1482)
(1483)

A thematic and comparative study of American literature. Although the emphasis is on studying works of fiction, some sections may also examine music and cinema. The course considers the works of linguistic and ethnic minorities and of women to be seminal in the American literary canon. Representative authors include Hawthorne, Twain, Dickinson, Fitzgerald, Hemingway, Erdrich, Baraka, Wilson, Shange, West, DeLillo, Shepard, Didion, and Walker. (Mr. Bernieri, Mr. Cobb, Mr. Thorn, Ms. Fan, Mr. Bardo, Ms. Moss, Mr. Price, Mr. O'Connor, Mr. Smith)

More specific descriptions of the following two courses and their teachers will be available during the spring sign-up for 1989-90 courses:

430—123 (1531) Theme Studies
(1532)
(1533)

Cutting across historical, cultural and generic lines, this course is organized around the exploration of a theme, motif, archetype or concept central to a number of different literary texts.

431—123 (1541) Genre Studies
(1542)
(1543)

This course is built on the principle that there are groups of formal or technical characteristics existing among works of the same "kind" (e.g. the essay, the short story, the novel) regardless of time or place of composition, author or subject matter; and that these characteristics, when they define a definite group of works, are of basic significance in talking about literary art.

ALL OF THE FOLLOWING COURSES MAY REQUIRE MORE THAN THE STANDARD 4 TO 5 HOURS PER WEEK OF HOMEWORK.

500—23 (1602) James Joyce
(1603)

The first term is devoted to *Dubliners*, *A Portrait of Artist*, and *Stephen Hero*, and Ellmann's *James Joyce*; the second to *Ulysses* and *Finnegans Wake* in part. The purpose of the course is to follow the development of Joyce's method and style and to develop the skill to read important and

difficult works without the aid of study guides and other secondary material beyond the Ellmann. Although the course may be taken in either term, the student gains a better sense of Joyce's genius by enrolling for two terms. (Dr. Germain)

504—123 (1641) Man and God
(1642)
(1643)

The course considers the search for meaning in what frequently seems to be an inexplicable world. Readings include: *King Lear*, Shakespeare; *As I Lay Dying*, Faulkner; *Long Day's Journey into Night*, O'Neill; *The Plague*, Camus; *The Fixer*, Malamud; *Notes from the Underground*, Dostoevski; *The Trial*, Kafka; *Wise Blood*, O'Connor; *Nine Stories*, Salinger; *The Birthday Party*, Pinter; *Alice in Wonderland*, Carroll; *Zorba the Greek*, Kazantzakis; *The Bluest Eye*, Morrison. (Miss St. Pierre)

508—23 (1682) Directions in 20th Century Drama
(1683)

The close study of significant contemporary drama. The winter term focuses on the first half of the 20th Century and plays by Shaw, Chekov, Strindberg, O'Casey, Brecht, Pirandello, and Ionesco are read; the spring term starts with Beckett, and includes plays by Williams, Bolt, Pinter, Albee, Stoppard, and Shepard. (Ms. Braverman, Mr. Owen)

509—1 (1691) Shakespeare on the Page and Stage
509—3 (1693)

The premise of this course is that Shakespeare's plays need to be "experienced," as reading alone may not reveal his remarkable scene-making ability, his brilliant theatricality. In this course we will experience the plays as playtexts — directing and acting in scenes, as well as watching films of vintage and recent productions. As opportunities present themselves, we will attend stage productions in the area. (FALL: *Kings and Kingship* - readings: *King Lear*, *Richard III*, *Macbeth*, *1 Henry IV*, *Measure for Measure*. SPRING: *Labour of Love* - reading: *Much Ado About Nothing*, *All's Well that Ends Well*, *Antony and Cleopatra*, *Othello*.) (Mr. Lin)

510—123 (1701) The Short Novel
(1702)
(1703)

The course examines major experimental works in this genre and questions the artistic and social forces that gave rise to these novels. Each term draws comparisons between works from diverse world cultures and different points in modern history. Students may read works by Kafka, Camus, Salinger, Vonnegut, Gardner, Walker, Oates, Mann, O'Connor, McCullers, Melville, Hemingway, Rulfo, Pynchon, Durrell, Naylor, Puig, Kotzwinkle, McGuane, Hong-Kingston, Le Carre. (Mr. Pepper)

512—123 (1721) Satire and Comedy
(1722)
(1723)

A study of both the theories and practice of satire and comedy, with emphases on the eighteenth century and the modern period. Works by authors like Pope, Swift, Sterne, Ben Jonson, Waugh, and Heller will be studied in conjunction with the visual art of Hogarth and Steinberg, and recordings of modern performers like Peter Cook, Dudley Moore, Mel Brooks, and Peter Sellers. (Mr. Regan)

513—123 (1731) Novel & Drama Seminar
(1732)
(1733)

The course concentrates on major works of literature since 1880, primarily on the works of Virginia Woolf, Henry James, David Storey, Franz Kafka, Flannery O'Connor, T.S. Eliot, Samuel Beckett, Eugene O'Neill, William Faulkner, Gunter Grass, Saul Bellow, Gabriel Garcia Marquez, Grace Paley, John Barth, Isaac Bashevis Singer, Robert Stone, Elie Weisel, Harold Pinter, Bertolt Brecht, August Wilson, Toni Morrison, and Vladimir Nabokov. Students study the "world" of each writer and compare it with that of the others. As a basis for the comparison with the classics of the past, they also study a Greek Tragedy and *The Brothers Karamazov*. Class periods are devoted to seminar discussions (often led by students) and critiques of student writing. Students regularly stage dramatic readings, cast and performed by the class. (Mr. Wise)

514—123 (1741) Creative Writing
(1742)
(1743)

A writing course in poetry and short fiction and the personal essay. Students may be asked to keep journals or to do short reading assignments, but the primary emphasis is on the body of work the student creates during the term. Content varies from term to term according to the instructor. (Mr. Gould, Mr. Cobb, Ms. Moss, Mr. Smith)

515—123 (1751) Literature of the Quest
(1752)
(1753)

Focusing on the ancient pattern of the journey, the thresholds crossed and the vision obtained, the course asks students to interpret elements of the quest from a variety of perspectives. In the Fall Term readings include Socrates' *Euthyphro* and *Oedipus Rex*, the Abraham cycle, Beckett's *Waiting for Godot*, and Eliot's *The Waste Land*. The Winter Term considers the suffering encountered on the quest and explores themes from the gospel of Mark, *King Lear*, *The Great Gatsby*, Wiesel's *Night*, West's *Miss Lonelyhearts* and Flannery O'Connor's *Everything That Rises Must Converge*. The Spring Term questions the journey's end, reading the Amor and Psyche myth and *Alice*

in *Wonderland*, comparing Jacob and Jesus and ending with two tragicomedies: *The Tempest* and *Who's Afraid of Virginia Woolf?* (Mr. Zaeder)

516—2 (1762)

Playwriting

Each student is expected to write at least one one-act play in addition to certain exercises in monologue, dialogue, and scene setting. The class reads aloud from students' work-in-progress while studying the formal elements in plays by important playwrights and by reading selected literary criticism focused on drama.

518—3 (1783)

Spenser and Milton

Students read minor works of both authors as well as Spenser's *The Faerie Queene* (Books I-II) and Milton's *Paradise Lost*. (Mr. Kalkstein)

520—123 (1801)

Images of Women

(1802)

(1803)

This course will examine, through the study of literature, (and, in some terms, film) woman as she perceives herself and as she is perceived by others. It will explore works by both men and women writers (and directors) and will focus on the constant and the changing image of woman in different literary periods. Texts may include: *Pride and Prejudice*, Austen; *Jane Eyre*, Bronte; a play by Ibsen; *Tess of the D'Urbervilles*, Hardy; *The Awakening*, Chopin; *The Yellow Wall-Paper*, Gilman; *Sons and Lovers*, Lawrence; a play by Shaw; *A Room of One's Own*, Woolf; a novel by Woolf; *A Room with a View*, Forester; a novel or short story by Hemingway or Fitzgerald; *The French Lieutenant's Woman*, Fowles; *The Color Purple*, Walker; *The Penguin Book of Women Poets*. (Films, when included, will range from Hollywood features, 1940s through the present, to foreign films, with some documentaries. Examples: *Adam's Rib*, Cukor; a film by Hitchcock; *Coming Home*, Ashby; *The Color Purple*, Spielberg; *Cries and Whispers*, Bergman; *My Brilliant Career*, Armstrong; *Still Killing Us Softly*, Kilbourne.) (Ms. Fan, Ms. Boutillier, Ms. Braverman)

527—1 (1871)

Chaucer and His Age

This course examines the limits of young love, lust and heartbreak in medieval England. We read Chaucer's *Knight's Tale* and *Troilus and Criseyde* in Middle English, and *Sir Gawain and the Green Knight* in translation.

528—2 (1882)

Studies in Literature

'*A Hard Rain's A-Gonna Fall*' This course is a single term course which concentrates largely on America from 1958-1975 by exploring our country's involvement in Southeast Asia and the impact of this commitment on American film, literature and music. Students keep journals and are required to submit a paper or project which incorporates primary sources. Class time is arranged so that each week a film is shown at night, a regular class period is devoted to music and a two-hour seminar is

held to discuss the many issues raised through all the media. Texts: *Shallow Graves*, *A Rumor of War*, *Mediations in Green*, *Streamers*, *Medal of Honor Rag*, *Imagining Argentina*. Films: *Dr. Strangelove*, *The Ugly American*, *Coming Home*, *Full Metal Jacket*, *Cutter's Way*, *The Deer Hunter*. Music: Bob Dylan, CSN&Y, Jefferson Airplane, Little Steven. (Mr. Bardo.)

More specific descriptions of the following two courses and their teachers will be available during the spring sign-up for 1989-90 courses:

530—123 (1931)

Period Studies

(1932)

(1933)

Focusing on the major writers and texts of a particular literary epoch, the course considers how the literature illuminates and is illuminated by its historical context.

531—123 (1941)

Writers in Depth

(1942)

(1943)

Focusing on one or two figures central to a particular literary epoch, the course allows students to study a writer's oeuvre in depth. Special attention will be paid to the biographical and historical contents of the literary works of these major figures.

The following Theatre courses, which are related to English studies, have no prerequisites: **Theatre 22 (Public Speaking)**, and **Theatre 28 (Shakespearean Workshop)**. Other courses related to English are **Art 311 (Contemporary Communications)**, **History 66 (The Renaissance)**, and, in the Study Skills section, **Basic Study Skills**, **Language Skills I & II**.

Foreign Languages

Andover's requirement of at least three high school years of an ancient or modern language rests on the firm belief that direct acquaintance, through language, with the spirit and people of other lands is a psychological and intellectual resource of inestimable value for each individual, for every country, and for our common world.

The diploma requirement is satisfied by completion of three trimesters at the 30-level reached through the regular sequence, or by one trimester of 40-level reached through the accelerated sequence. Placement of new students is based on their previous school record, on the questionnaire sent to them and their current language teachers in

the Spring, and, when appropriate, on a personal interview with the language chairman at Andover. Details regarding various options and the diploma requirement as it is applicable to "incoming Uppers and Seniors who begin a new language at Andover" are available from the Registrar's Office. Further information may be found in the pamphlet entitled *Foreign Languages at Andover*.

With the exception of Italian (limited to Seniors), each of our languages, ancient and modern, may appropriately be started by students of any grade, Juniors (9th) through Seniors. Most Andover students continue their language study beyond the third year. Some study a second language in addition.

Small classes, flexible placement, and opportunities for acceleration assure that each student is in the optimum learning situation. In the case of modern languages, the foreign language is the language of the classroom. In conversation, in reading, and in writing, the goal is direct communication in the foreign language rather than through translation. The classroom experience is expanded by the language laboratory; media resources (e.g., periodicals, radio broadcasts, videotapes, movies, computers); the staging of plays; club activities; language events and programs at Andover or nearby schools. At all levels of instruction attention is focused both on basic language skills and, increasingly, on the literature, history, and various art forms which reveal the people whose languages are being studied. For information on *School Year Abroad* and other opportunities to study abroad, students should consult their language instructor or the Chair of the Language Division. (See page 3 for fuller description.)

Chinese

Although the Chinese language may appear mysterious to Western eyes and ears, it is actually no more difficult than any other to speak. With no conjugations, verb tenses or declensions there are

some aspects which actually make it easier. To learn Chinese is to open a bridge to the Orient.

Mandarin Chinese is the language of instruction. *Pinyin* is the standard Romanization system for all courses. Simplified characters are taught in early courses and traditional characters are introduced from intermediate courses on. Emphasis in beginning courses is on listening and speaking skills in typical everyday situations for learners of Chinese as a foreign language, although students are exposed at an early stage to the more challenging task of learning to read and write the non-alphabetical characters. Frequent use is made of tapes, video cassettes and computer software. Opportunities are available for qualified students to participate in a six-week study-travel summer exchange program in Harbin and a ten-week spring term exchange program in Beijing, China.

10—0 (4410)

Beginning Chinese

Five prepared class periods. An introduction to modern spoken and written Chinese, stressing pronunciation and aural-oral facility, and including the reading and writing of characters.

12—23 (4425)

Accelerated Beginning Chinese (T2) (a two-term commitment)

Five prepared class periods. Especially competent students will be recommended by the department for this accelerated course at the conclusion of the first trimester of *Chinese 10*. Upon successful completion of this course, students move on to *Chinese 22-0*.

10-20—0 (4430)

Accelerated First and Second-Level Chinese

Five prepared class periods. Open to Seniors, and to Uppers with permission. An intensive yearlong course covering the essential material of both *Chinese 10* and *Chinese 20*.

20—0 (4440)

Second-Level Chinese

Five prepared class periods. Continued emphasis on proficiency in typical everyday situations. All essential features of Chinese grammar are covered. Texts with both characters and *pinyin* Romanization are replaced by all-character texts.

22—0 (4450)

Accelerated Second-Level Chinese

Five prepared class periods. Placement is made by permission of the department. Upon successful completion of this course, students move directly to Fourth-Level Chinese.

30—0 (4460)**Third-Level Chinese**

Four prepared class periods. More emphasis on reading and writing. Graded readers are used as basic texts. Their contents include folk tales, stories, episodes from classical literature, biographies and introduction to Chinese history and culture. Regular written assignments, including short compositions.

40—0 (4480)**Fourth-Level Chinese**

Four prepared class periods. Readings, in both traditional and simplified characters, are selected to stimulate interest in Chinese culture, ancient and modern. Topics in history, literature, and current events will serve as a basis for discussions and short compositions. Graded readers and simple originals are used as basic texts. A term paper is required at the end of each trimester.

50—0 (4490)**Fifth-Level Chinese**

Three prepared class periods. An advanced course using original texts and featuring a survey of Chinese literature accompanied by selected readings in Chinese literature both classic and modern. There is particular emphasis on the development of a mature writing style.

French

The French Department offers courses at six different levels from beginning through Advanced Placement and beyond to courses for fluent speakers. At all levels French is the language of the classroom and in all courses it is taught in cultural contexts. The first two years emphasize basic language structures; the third serves as a transition to advanced courses which offer in-depth study of the literature and civilization of France and other French-speaking countries, especially those in Africa and North America. Each year, the Academy enrolls many French-speaking students from abroad who provide important first-hand contact with francophone cultures. Students are encouraged to supplement classroom study with travel and study overseas, whether in France (*School Year Abroad* in Rennes, trimester programs in Paris and Antibes) or in the Ivory Coast (trimester program in Abidjan). There are also a variety of summer programs offered by other institutions. Information on any of these off-campus opportunities can be obtained from the Foreign Language Office.

10—0 (4010)**Première année**

First-year French for students who have had no previous courses in the language. Five prepared class periods. Listening comprehension and the use of basic conversational patterns of French speech are emphasized. Elementary grammatical and idiomatic structures are introduced as well as appropriate reading material. Students make extensive use of video materials both in and out of class; assignments are also regularly required in the language laboratory. Text: *French in Action*, Capretz.

11—0 (4030)**Premier niveau**

First level French. Five prepared class periods. This course is designed for the student who has had previous instruction in the language, but whose knowledge and skills are not secure enough for entrance to a second-level section. It is also appropriate for students with experience in other languages who wish to begin the study of French. The course emphasizes the development of oral-aural skills and prepares for *French 21* the following year. Students make extensive use of video materials both in and out of class; assignments are also regularly required in the language laboratory. Students who demonstrate unusual aptitude and interest are invited to enter *French 22*, the second level accelerated course. Text: *French in Action*, Capretz.

21—0 (4060)**Deuxième niveau**

Second level French. Five prepared class periods. For students who have completed *French 10* or *French 11* and for new students who qualify through teacher recommendations or placement examination. While continuing to develop aural-oral skills, the course involves reading non-technical French prose and writing simple compositions. Text: *Encore Une Fois*, Herbst, Sturges.

22—0 (4070)**Cours accéléré. Deuxième niveau**

Accelerated second level French which covers the grammar of both second and third-year courses. Five prepared class periods. Upon successful completion of this course, students continue their studies in fourth-year courses. Because of the rapid pace, each student's progress will be closely evaluated in November to determine whether it is in his or her best interest to continue in this accelerated section or to move to *French 21*. Texts: *La Grammaire à L'Oeuvre*, Barson; *Le Petit Nicolas*, Gosciny; *Les Petits Enfants du Siècle*, Rochefort; *Les Jeux sont faits*, Sarte.

THIRD-LEVEL COURSES

A two-trimester departmental Conversation and Composition course is followed by a trimester course which creates a transition to more specialized studies.

Conversation et composition

Four prepared class periods. Students gain practice in conversation and composition in a course which stresses the development of all four basic language skills: listening, speaking, reading, writing. The focus of the course may be chosen between the following options.

30—12 (4094) Conversation et Composition: Réalités (T2) (a two-term commitment)

Students will thoroughly review grammar in the context of discussions on topics dealing with everyday life. Weekly compositions are required. Students have a chance to actively use material covered and demonstrate their oral command of the language through the production of several live or video-taped skits. Text: *Grammaire à l'Oeuvre*, Barson.

31—12 (4104) Conversation et Composition: Fictions (T2) (a two term commitment)

Short works of fiction are the starting points for discussions and compositions. Usually the fictional passages selected also serve as an example of grammatical structures studied simultaneously. Several times a term student writing takes the form of scenarios which are then performed and filmed. Text: *Grammaire à l'Oeuvre*, Barson.

Cours spécialisé

Four prepared class periods. Each third trimester course involves learning about a particular subject in French, with language review supplied as needed. Whereas any one of the seven courses offered below could fulfill course objectives for all students, the Department prefers to offer variety, with the understanding that student choice can be accommodated only to the extent that overall enrollment permits.

32—3 (4113) Le village français

Using, as points of departure, the impressions and misimpressions which French and Americans have of each other's culture, this course attempts to give the student a better understanding of the French people and their institutions as reflected in the microcosm of a town. With the student's hometown as a basis of comparison, several French towns are examined in depth, including the provincial towns of Roussillon and Cassis and a town of the student's own choice. The basic text, Wylie, *Village en Vaucluse*, is complemented by readings, lectures, original documents, and both national and regional newspapers and magazine articles.

34—3 (4133)

Le roman

One novel will be examined during the term, with emphasis on vocabulary building, oral expression in class discussion and methods of literary analysis. (Novels selected in the past have included Sartre, *Les Jeux sont faits*, Camara Laye, *L'Enfant Noir*, Vercors, *Le Silence de la Mer*.)

36—3 (4143)

Le cinéma

Several films chosen by theme or by director will be viewed and discussed. At least one script or the corresponding novel, play or cartoon will be read. Students may be asked to produce a video sequence of their own creation.

37—3 (4153)

Le journalisme

Students discuss examples of French journalism and then write their own articles, editorials, sports columns, advertisements, movie reviews, and interviews which they assemble in a French newspaper as their final project. Text: *En Revue*, Schorr.

38—3 (4163)

Contes

Francophone literature abounds in examples of the tale, from the fairy tales of Perrault and folk tales of various francophone countries to the satirical tales of Voltaire. This course will offer an overview of the genre, while concentrating on particular examples.

39—3 (4173)

Le théâtre

An active participation course in which the student follows one play from the initial reading through its final production, taking part in each of the four major phases: reading, analysis, production, performance. (Plays presented in the past have included *Le Malentendu*, Camus; *La Cantatrice Chauve*, Ionesco; *Le bal des voleurs*, Anouilh.)

40—123 (4191)

La civilisation française

(4192)

(4193)

Four prepared class periods. The course, consisting of three term-contained units, deals with aspects of French civilization such as the family, the school system, politics, history, women's roles, and francophone cultures. Students increase their practical vocabulary through discussion of articles, short stories, novels, song lyrics, films, and comic strips.

41—1 (4201)

Le monde francophone en dehors de l'Europe

Four prepared class periods. As an international colonial power France spread her culture throughout the world. The course studies the civilizations of West, Equatorial, and North (Arab) Africa as well as the French civilization of the Antilles (Haiti, Martinique, and Guadeloupe). In addition to geographical, social, and historical study, the course will include the following reading: J. Roumain, *Gouverneurs de la rosée*; Aimée Césaire, *La tragédie du roi Christophe*; F. Oyono, *Le vieux nègre et la médaille*.

42—0 (4210)**Littérature française**

Four prepared class periods. A transition from the use of reading as a means of learning the language to the use of language as a means of learning literature. Vocabulary expansion, increased oral fluency and written accuracy are developed within the context of literary analysis. Readings have recently included: *L'Etranger*, Camus; *Candide*, Voltaire; *Rhinoceros*, Ionesco. Students successfully completing this course are encouraged to take French 52.

44—1 (4231)**Cours avancé de conversation et de phonétique**

Four prepared class periods. Intended for students who understand, read and write French well and who already speak at a competent level, but who need further drill in conversational patterns and idiomatic expression. Diction, elocution, and intonation are also stressed through role-playing, speeches, and debates.

45—2 (4242)**Histoire de la France: la Révolution française**

Four prepared class periods. This course will examine the tumultuous period in French History between 1789 and 1848 by examining the causes, events and significance of the French Revolution, including the reign of Napoleon, as well as the long-term consequences on the French nation until the mid-19th century. Emphasis will be placed not only on the historical events of the time, but their influence on the French art, music and architecture of the time.

46—3 (4253) Histoire de la France: Crises et Culture

Four prepared class periods. This course will focus on the history and culture of France from the Revolution of 1848 until the First World War, with emphasis on the prolonged struggle to institute democracy in the place of monarchy, the development as an industrialized nation with the pressures for social reform, and France's grandeur in the world as a colonial power as well as in the arts. Against this backdrop of upheaval and reform, particular attention will be paid to the study of French Impressionist painting, the music of Debussy and Ravel and the sculpture of Rodin.

**51—123 (4261)
(4262)
(4263)****Cours avancé de langue**

Five prepared class periods. A course designed to meet the requirements of the Advanced Placement Examination in French Language. Open to students who have completed three terms of fourth-level French and to qualified new students. Emphasis is placed on vocabulary, grammar, conversation, composition, and reading, not only in literature, but in current newspapers and periodicals. The choice of texts is generally determined by the class and the instructor.

52—0 (4270)**Cours avancé de littérature**

Five prepared class periods. Open with departmental permission, to students who have completed three terms of fourth-level French and to others who are properly qualified. Primarily a seminar in which students share their interpretations of works studied in class discussions and oral exposés, the course also includes lectures and instruction in *explication de textes*. Preparation for the Advanced Placement Examination in French Literature includes the close reading of texts such as: La Fontaine, *Fables*; Racine, *Phèdre*; Beaumarchais, *Le Barbier de Séville*; Flaubert, *Un Coeur simple*; poetry of Apollinaire, and Baudelaire. This course may require more than the standard 4 to 5 hours per week of homework.

**60—123 (4281)
(4282)
(4283)****Littérature moderne**

Two prepared class periods plus one weekly (90 minute) seminar. Open to students who have completed fifth-level French or the equivalent. The course studies selected novels and dramas representative of modern era. Emphasis is on particular writers and what they add to our understanding of the human condition in our times. Authors studied may include: Proust, Gide, Colette, Malraux, Mauriac, Aragon, Saint-Exupéry, Giono, Anouilh, Giraudoux, Aymé, Camus, Sartre, de Beauvoir, Hébert, Laye and Senghor.

German

A major world language whose cultural heritage has enriched western civilization for centuries, German has won a new relevance and vitality through its predominance in high technology and commerce. As the only Germanic language taught at the Academy, it also offers the student unique insights into the Anglo-Saxon roots of English, its sibling. The Department offers a 5-year course of study with the purpose of developing the ability to understand spoken German and to speak, read and write German with facility. Students who demonstrate unusual aptitude and interest are invited into the accelerated sequence. Consistent with its commitment to the spoken language, the Department often holds oral as well as written final examinations. In some courses theater is used to enliven speech development and cultural immersion. Students are encouraged to supplement their on-campus language experience through a winter or

spring trimester of study in Göttingen, Germany as arranged, individually through the department and the dean of studies.

10—0 (4300) First-Level German
Five prepared class periods. The beginning course develops aural comprehension and oral expression, as well as a foundation in the basic grammar. Current text: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; departmental materials.

12—23 (4315) Accelerated First-level German (T2)
Five prepared class periods. This course is for especially competent members of German 10 upon recommendation of their instructor. Successful completion of 12 allows students to advance to 22. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Kindergeschichten*, Bichsel; departmental materials.

10-20—0 (4320) Accelerated First and Second-Level German
Five prepared class periods. A yearlong introductory course whose goal is to cover the essential material of first and second-year German, 10-20 is particularly suited to students who have already fulfilled the diploma requirement and desire proficiency in another language. For Seniors, and for Uppers with permission. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Kindergeschichten*, Bichsel; supplementary materials.

20—0 (4330) Second-Level German
Five prepared class periods. The study of grammar and basic patterns is continued. Reading and writing are introduced. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Leutebuch, ein leichtes Lesebuch*, Holschuh; *Vater und Sohn*, Eppert; selected readings and tapes.

22—0 (4340) Accelerated Second-Level German
Five prepared class periods. Open to competent students from 12 and to other qualified new students with permission. Successful completion of this course, which attempts to cover the essential material of second and third-year German, enables advancement to German 42 or 40. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Der Richter und sein Henker*, Dürrenmatt; *Biedermann und die Brandstifter*, Frisch; supplementary readings and tapes.

30—0 (4350) Third Level German
Four prepared class periods. This course emphasizes review, reading and listening comprehension, vocabulary, and written and oral expression in preparation for the College Board Achievement Test. Current texts: *German in Review*, Sparks & Vail; *Der Richter und Sein Henker*,

Dürrenmatt; *Vater und Sohn*, Eppert; *Biedermann und die Brandstifter*, Frisch; selected readings and tapes.

40—123 (4371) Contemporary German Language and Culture
(4372)
(4373)

Four prepared class periods. This course utilizes contemporary cultural materials such as periodicals, tapes, videos, and readings to introduce students to the knowledge, skills and vocabulary necessary to engage with Germans in Germany. Normally required of those Seniors intending to study in Germany Winter Term. Among the materials used are the newspaper *Die Zeit* and the periodical *Der Spiegel*.

42—0 (4380) Advanced German Language and Literature

Five prepared class periods. This course utilizes advanced German literary works as a basis for conversation and composition in preparation for the Advanced Placement Test. Selective review is incorporated. Current texts: *Cornet*, Rilke; *Die Verwandlung*, Kafka; *Kalendergeschichten*, Brecht; *Michael Kolhaas*, Kleist; selected poems; *German in Review*, Sparks & Vail. This course may require more than the usual 4-5 hours per week of homework.

50—123 (4391) Fifth-Level German
(4392)
(4393)

Four prepared class periods. Open to students who have successfully completed 3 terms of fourth-level German or its equivalent, this course varies with the needs of the class but is usually a seminar in the analytical reading of modern German classics. There is frequent writing. A major term paper in German replaces the final exam. Authors currently read: Böll, Kafka, Kleist, Goethe, Mann and Brecht.

Greek

Through the study of Greek the Department of Classics offers students a direct entry into Greek literature. The Greek alphabet is easily mastered in the first few class meetings, and students quickly discover that the Greek language has poetic and expressive qualities which stimulate the imagination and illuminate the early political and intellectual development of the Mediterranean basin. The regular sequence in Greek is *Greek 10, 20, 30*, and *40*, though Upper Middlers wishing to accelerate may want to consider *Greek 10-20* followed by *Greek 30*.

10—0 (5010)**Greek, First Level**

Five prepared class periods. The course introduces the student directly to the Classical Greek of Periclean Athens through a series of readings which present not only the vocabulary, forms and syntax of the language but also the thoughts, feelings and actions that exemplify the Greek genius. Though preliminary selections are necessarily simplified, within the first year students are reading excerpts in their original form from various Greek authors.

10-20—0 (5020)**Greek, First and Second Level, Accelerated**

Five prepared class periods. The course is open to Seniors and Uppers. It covers in one year the essential material of *Greek 10* and *Greek 20*: basic forms and structure, along with ample selected readings from various Greek authors.

13—1 (5031)**Introduction to Greek****13—2 (5032)****13—3 (5033)**

Four prepared class periods. The course is for students whose curiosity for the Greek language and literature has been aroused by their studies in other areas. For students who plan some day to study Russian or German, this course provides an excellent introduction into the intricacies of a highly inflected language. The student is also treated to an inside preview of a literature which, over the centuries, has provided inspiration and models for the literature of the Western World. It is a term-contained course, but students wishing to continue with Greek will have the opportunity to do so.

20—0 (5040)**Greek Second Level**

Five prepared class periods. The course continues the format of *Greek 10*, with further systematic development of reading skills and control of vocabulary, forms, and syntax through the medium of more advanced selections from the Greek masterpieces, always with the purpose of understanding the spirit of the people that produced them.

30—0 (5050) Greek, Third Level: *Iliad* and *Odyssey*

Four prepared class periods. Selected books of the *Iliad* and the *Odyssey*, and sometimes a play of Euripides or Sophocles. Students examine the nature of tragedy, heroism, and self-discovery.

40—123 (5061)**Greek, Fourth Level:****(5062)****History, Tragedy, Lyric****(5063)**

Four prepared class periods. Ancient concepts of justice and morality are examined through the works of Herodotus and Thucydides. Human tragedy is explored in a play of Sophocles or Euripides. One term is devoted to the study of emotion and self-expression in the Greek lyric poets.

Italian

Students may apply to spend the Spring term in Italy, living with a family and attending high school. See Dr. Pascucci for further information.

10-20—0 (4400)**First and Second Level, Intensive**

Open to Seniors, and to Uppers with permission. Five class periods. Three additional meetings (30 minutes), to be arranged, will take the place of 1/2 of the usual homework obligation on those days; these small sessions afford drill and spontaneity in understanding and speaking Italian. A college text is supplemented by readings, recordings, songs, and the libretti and music of Italian opera. An Italian movie is read, studied, and seen. This course prepares students for Italian at college at intermediate and advanced levels.

Latin

Through the study of Latin, the Department of Classics offers students a direct entry into Latin literature. Since the past is in a real sense inherent in the present, the Department teaches language in a literary and historical context that gives students the opportunity to savor the beauty and to appreciate the uniqueness of Roman culture, while providing a valuable perspective on their own modern world.

10—0 (5110)**Latin, First Level**

Five prepared class periods. The purpose of the course is for students to learn to read Latin literature with discernment and pleasure. Students learn the basic forms and syntax through reading and oral drill. More advanced grammatical constructions (subjunctives, indirect discourse, and the ablative absolute) are introduced but not studied in depth. Attention is given to aspects of Roman civilization, word formation, and the influence of Latin on English. In addition there are readings from the literature of the Bible in Latin and some selections from Roman authors in English. The text is Lawall and Tafe, *Ecce Romani*, Books 1-3 (Longman).

10-20—0 (5120)**Latin, First and Second Level, Accelerated**

Five prepared class periods. For Upper Middlers and Seniors. A year-long accelerated introductory course covering the essential elements of *Latin 10* and *Latin 20*.

- 13—1 (5141) Introduction to Latin
13—2 (5142)
13—3 (5143)

Four prepared class periods. The course is for students seeking an introduction to the Latin language, or those whose studies in other languages (including English) have aroused their curiosity about the workings of languages (grammar, syntax and vocabulary). It offers special profit and fascination to students of French, Spanish, and Italian, since it gives a wider perspective to much of what they already know. For students who plan some day to study Russian or German it serves as an introduction to the workings of highly inflected languages. It is a term-contained course, but students wishing to continue with Latin will have the opportunity to do so. The text is Lawall and Tafe, *Ecce Romani*, Book 1 (Longman).

- 20—0 (5150) Latin, Second Level:
Caesar, Ovid, Nero

Five prepared class periods. During the Fall Term the grammar and readings in Lawall and Tafe, *Ecce Romani*, Book 4 (Longman) are completed. In the Winter Term students read, in both Latin and English, Roman biography from the late Republic and early Empire. Selections of prose by and about Julius Caesar and Augustus as well as poems of love and mythology of Ovid are included. Students will find fascination in the Spring Term studying the biography of the imperial ogre Nero and Petronius' satiric account of a feast in Nero's time with the text, Balme, *The Millionaire's Dinner Party* (Oxford).

- 30—0 (5170) Latin, Third Level:
Cicero, Vergil, Apuleius

Four prepared class periods. The swan song of the Roman Republic is heard through the study of the life of Cicero with readings in Latin and English from Cicero himself, Catullus, and other Latin authors. Systematic review of grammar strengthens the student's Latin reading skills. The poetry of Vergil is introduced in the Winter Term with *Aeneid*, Book II. In the Spring Term the student becomes familiar with life under the Empire through the social, religious, and literary elements of Apuleius' *Golden Ass* and Juvenal's *Satires*. The basic text is Gillingham and Barrett, *Latin: Our Living Heritage*, Book III (Merrill).

- 40—123 (5191) Latin, Fourth Level: Vergil,
(5192) Suetonius, Catullus
(5193)

Four prepared class periods. The Fall Term is spent reading *Aeneid*, Book IV, the great tragic romance of Dido and Aeneas. The Winter Term offers the contrast of the Silver Age prose of Suetonius' biography of the Emperor Claudius along with Seneca's *Apocolocyntosis*, a rude farce about Claudius' deification. The Spring Term focuses on the emotional lyric poetry of Catullus, the most romantic and accessible of the ancient love poets.

- 50—123 (5201) Latin, Fifth Level:
(5202) Vergil, Tacitus, Pliny, Horace
(5203)

Four prepared class periods. In the Fall Term the students enter the world of Book VI of Vergil's *Aeneid*, examining his literary form and technique, as well as the social and political dimensions of his epic. The Winter Term students study the Golden Age of Augustus through the lyric poetry of Horace, whose work displays flawless control of language and timeless ethical and moral ideals. Completion of the sequence of *Latin 30, 40, and 50* will qualify the student for the Advanced Placement Examination in Latin. The Spring Term takes up selections from Tacitus' *Histories* and *Annals*. Together with Tacitus' gripping study of hopelessness and disillusion in the decaying Rome of tyrants like Nero, students read from Pliny's letters, including his eyewitness accounts of the eruption of Vesuvius and the persecution of Christians.

Russian

Communication in Russian and a knowledge of Russian culture are essential for productive interaction with the U.S.S.R. in technology and science, and for achieving controlled, responsible international relations.

As of 1987, this goal has been realized for Phillips Academy Russian students through an official cultural and educational exchange with the Novosibirsk High School of Math and Science in the U.S.S.R. This term-long exchange sends PA students of Russian to attend classes at the Novosibirsk High School while Soviet high school students study here at Andover. The term concludes with a tour of several Soviet cities.

Before studying Russian, many consider it strange and difficult; but its alphabet and vocabulary have the same sources as English, and it follows the same principles of grammar. Continuous oral, visual and instructional use quickly makes Russian familiar and enjoyable.

The Russian Department offers a five-year course of study. This well-established program ensures confident progress in speaking, aural comprehension, reading, and writing. Elementary courses use computer drills to strengthen grammar

skills. At the upper levels, students use Russian word processors for their compositions. Students who demonstrate unusual aptitude and interest during the first term are invited to enter special accelerated sections in the second term. It is the policy of the Department to use Russian exclusively in the classroom.

10—0 (4500) Introduction to Contemporary Russian

Five prepared class periods. A yearlong elementary course in speaking, listening, reading and writing. Texts: Kostomarov, *Russian for Everybody* (Russky Yazyk—Moscow); reference materials.

12—23 (4515) Contemporary Russian (Honors)(T2)
(a two-term commitment)

Five prepared class periods. Especially competent students will be recommended for this accelerated course at the conclusion of the first trimester of *Russian 10*. Successful completion of 12 enables students to enter 22. Texts are essentially those of *Russian 10* and *Russian 20*. This course may require more than the standard 4 to 5 hours per week of homework.

13—3 (4523) A Short Course in Beginning Russian

Four prepared class periods. Open to Seniors and Up-pers. A term-contained introduction to speaking, reading, and writing Russian, using conversational text materials. This course enables students to feel comfortable with the somewhat different features of a Slavic language. It also gives a sound foundation for continuing courses in Russian language, history, and literature, whether at Andover or in college.

For another course related to Russian history and culture see History 45.

10-20—0 (4530) Intensive Contemporary Russian

Five prepared class periods. Open to Seniors, and to Up-pers with permission. A yearlong accelerated introductory course covering two years in one. Texts: Kostomarov, *Russian for Everybody*; reference materials. This course may require more than the standard 4 to 5 hours per week of homework.

20—0 (4540) Intermediate Contemporary Russian

Five prepared class periods. Completion of the elementary course with continued emphasis on active use. Texts: Kostomarov, *Russian for Everybody*; Bond, *Russian Graded Readers* (Heath); reference materials.

22—0 (4550) Intermediate Contemporary Russian (Honors)

Five prepared class periods. A yearlong accelerated course open to students who have successfully completed *Russian 12* and to other qualified students with departmental permission. Successful completion enables students to advance to fourth-level courses. Texts and reading materials are essentially those of *Russian 20* and *Russian 30*. This course may require more than the standard 4 to 5 hours per week of homework.

30—0 (4560) Russian Expression: Conversation and Composition

Four prepared class periods. Reading, conversation, and writing. Texts: Pekhlivanova & Lebedeva, *Russian Grammar in Pictures* (Russky Yazyk — Moscow); Bond, *Russian Graded Readers* (Heath). Reading materials include selections on Russian culture, history, geography, and Soviet civilization. Students use word processors in their composition work.

40—123 (4571) Advanced Russian Composition and Russian Classical Literature
(4572)
(4573)

Four prepared class periods. Further work in conversation and writing, and an introduction to the "Golden Age" (19th Century) of Russian literature with selected readings from Pushkin, Chekhov, Gogol, Tolstoy, as well as some Soviet writers. This course may require more than the standard 4 to 5 hours of homework per week. Students use word processors in their composition work.

50—123 (4581) The Soviet People, Their Heritage and Literature
(4582)
(4583)

Four prepared class periods. Fall Term: RUSSIAN LITERATURE — readings from contemporary and pre-revolutionary authors.

Winter Term: SOVIET LITERATURE — an overview tracing the evolution of Russian literature from the Revolution through the war and post-war periods, and including writers in exile. Authors vary according to needs and interests of the class and may include Gorky, Bunin, Sholokhov, Bulgakov, Yevtushenko, Voznesensky, Solzhenitsyn.

Spring Term: THE SOVIET PRESS — a view of Soviet Life and culture as reflected in the media. The text is a subscription to a major Soviet newspaper. Students use word processors in their composition work.

Spanish

The Spanish Department offers a six-year course of study. Students who demonstrate unusual ability and interest during the first year are invited to join

an accelerated sequence. The language of the classroom is Spanish, and extensive use is made of the language laboratory. Students learn to understand, speak, read, and write the language, and also are given a comprehensive introduction to the literature and culture of Spain and Latin America.

The Department offers various programs of study and travel abroad which enhance a student's language experience. *School Year Abroad* in Barcelona and the Madrid and Mexico trimester exchanges are some of the possibilities. More information is available through language instructors.

10—0 (4600) Beginning Spanish

Five prepared class periods. A first-year course designed for those who have not studied Spanish before. The audio-lingual approach is used, stressing understanding and speaking. The textbook is supplemented by language laboratory practice and audio-visual materials. Selected readings and writing exercises are introduced as the student acquires confidence in oral expression.

11—0 (4620) First Level Spanish

Five prepared class periods. For new students who have been exposed to Spanish but who are not fully prepared for *Spanish 20*. The course covers basic grammatical structures through an active oral approach. The text is supplemented by language laboratory practice, selected readings and writing assignments.

10-20—0 (4630) Accelerated First and Second-Level Spanish

Five prepared class periods. Open to Seniors, and to Up-pers with permission of department chair. A yearlong accelerated introductory course which prepares the student for the third level. It develops proficiency in the four skills. The text is supplemented by short story and theatre selections.

20—0 (4640) Second-Level Spanish

Five prepared class periods. Emphasis is on oral communication with continued practice in reading and simple theme writing. An anthology of short stories supplements the text.

22—0 (4650) Accelerated Second-Level Spanish

Five prepared class periods. Open to students who have completed *Spanish 10* or *11* with distinction, and to other qualified students with departmental permission. An accelerated second-year course which develops communicative competence and provides intensive reading and writing practice. Students normally must maintain an honors grade to remain in this course. It enables high honors students to enroll in a 4th level course.

Third Level Courses

Intensive language practice is the focus of *all* third-level courses during the fall term. In the remaining two terms the following electives may be chosen: they are of equal difficulty and continue the development of all language skills.

30—1 (4691) Intensive Language Practice

Four prepared class periods. Thorough review of all grammatical structures, with particular emphasis on verb tenses (indicative and subjunctive) and idiomatic expressions. Its main goal is to develop greater accuracy and fluency in both written and oral expression.

31—23 (4715) Culture and Civilization of the Hispanic World (T2)

(a two-term commitment)

Four prepared class periods. An intermediate course which takes a social-studies approach to the culture and civilization of the Hispanic world. Students must have demonstrated a strong ability for oral and written self-expression and an interest in historical and cultural themes. This course is particularly well suited for the bilingual student.

32—23 (4725) Readings in Spanish (T2)

(a two-term commitment)

Four prepared class periods. An intermediate course which develops oral and writing skills through the study of Spanish and Latin American literature. The readings include short stories, poetry, plays and a novel.

34—23 (4745) Conversation and Composition (T2)

(a two-term commitment)

Four prepared class periods. An intermediate course which has as its principal goal the development of conversational and writing skills by dealing with topics of a general and contemporary nature.

40—12 (4804) Current Events; Video (T2)

(a two-term commitment)

Four prepared class periods. FALL - *Current Events*: This term the course is designed to expand and refine speaking, reading, and writing skills in Spanish. Students subscribe to the weekly International Edition of *El País*, one of Spain's leading newspapers. The articles are used as a basis for class discussions, oral presentations and weekly written analyses. At the end of the term, students produce their own newspaper and a newscast on video. WINTER- *Video*: This term the course exposes students to authentic and sophisticated native language usage through videos representing the major Spanish accent groups. Major emphasis is placed on dramatic representation, on the development of auditory skills and idiomatic language, on imitating native accent and intonation patterns and on refining writing skills. The course

also involves reading, discussing and filming of student presentations of one-act plays, and comparative study of written and filmed versions of selected pieces of Spanish and Latin American literature.

41—12 (4814) Video; Current Events (T2)
(a two-term commitment)

Four prepared class periods. FALL - *Video* (See *Spanish 40 - Winter*.) WINTER - *Current Events* (See *Spanish 40 - Fall*.)

42—0 (4820) Contemporary Spanish and Spanish American Literature

Four prepared class periods. Short stories, plays and poems by contemporary Spanish and Spanish American writers such as García Márquez, Cortázar, Rulfo, Borges, Donoso, Poniatowska, LaForet, Ferré, Fuentes, are closely examined in class and in weekly essays. Develops proficiency in all language skills.

43—3 (4833) Introduction to Spanish Literature

Four prepared class periods. This course introduces students to important Latin-American and Spanish literary works and prepares them to take the courses in A.P. Spanish Literature or A.P. Spanish Language (52 or 50). Students learn to read and analyze literary texts, to discuss characterization, theme, and literary form, and to write analytical essays on literature. Open to students who have completed the equivalent of our third-year courses or beyond.

50—12 (4844) Advanced Spanish Language (T2)
(a two-term commitment)

Four prepared class periods. A course, organized around contemporary themes, designed to develop students' Spanish language skills at the advanced level. Students consolidate skills of narration, description, exposition, and hypothesis, in line with both A.C.T.F.L. Advanced and Superior-level scales, and the expectations of the A.P. examination in Spanish Language. Emphasis is placed on mastery of grammar, syntax, and idiomatic expression at sophisticated levels. Students engage in readings (in literature as well as newspapers and periodicals), conversation, composition, and research or "field" projects. Open to students who have completed three terms of fourth-level Spanish and to other qualified students with departmental permission.

52—0 (4850) Advanced Placement Course in Literature

Four prepared class periods. This course emphasizes discussion and analysis of literary works in the classroom and through frequent written assignments. It prepares the student for the A.P. examination in Spanish literature. The readings include representative works of Ana María Matute, Unamuno, F. García Lorca, J.L. Borges, Pablo Neruda. This course may require more than the standard 4 to 5 hours per week of homework.

60—123 (4871)
(4872)
(4873)

Major Works in Spanish and Spanish American Literature

Four prepared class periods. Contents vary according to the needs and interests of the student. This course is recommended for native Spanish speakers (with solid writing skills) and students who have completed *Spanish 52*. It may require more than the standard 4 to 5 hours per week of homework.

See also Latin American Studies (History 49) listed under *History and the Social Sciences*.

History and Social Science

The study of history and the social sciences provides certain kinds of knowledge, skills, and understanding fundamental to a liberal education. A study of the American past continues to be a prerequisite for a participating citizen in a constitutional republic. Vital though such study is, an understanding of our nation alone is not enough. The examination of other cultures, both European and non-western, is crucial for broadening a student's understanding of an interdependent world. The Department of History and Social Science therefore integrates the study of non-western cultures into courses at every grade level.

To satisfy the diploma requirement, the student must successfully complete four terms of departmental study during the 11th and 12th grades. Most students satisfy this requirement by taking three terms of *United States history* (History 30-T2 and 31) and a fourth term of a *40-level social science or non-western survey*.

A student may, however, satisfy the 4th term of the requirement in other ways: (1) by taking *History 34-0*, the yearlong AP survey in Modern European History; (2) by taking a *50-level Survey* or a *60-level Seminar*, IF a student has passed at least two previous terms at the 10-20 level (or the equivalent) and has received permission from the department chair; or (3) for students assigned to *History 29-0* by the HQT, the completion of *History 31* satisfies the 4th term of the requirement.

One of the academic guidelines instituted by the Phillips Academy faculty urges that all 4-year students take "some history" by the end of the Lower year. Accordingly, the department strongly recommends that Juniors take *History 16*, which for them is the prerequisite to other courses in the Western Tradition sequence (*History 17, 18*) and to courses in the Modern World sequence (*History 26, 27, 28*). The department recommends that Lowers take courses in the Modern World sequence (*History 26, 27, 28*), although courses in the Western Tradition (*History 16, 17, 18*) are also open to them.

Exceptional 10th graders have two additional options. If they have completed at least two terms of history/social science, have made an outstanding score on the HQT, and have received permission from the department chair, then (1) they may take *History 34-0*, the yearlong course in Modern European history; or (2) they may take *United States History* (*History 30-T2* and *31*).

The History Qualifying Test (HQT) is given to Lowers and certain Juniors during spring term and to all new Uppers, Seniors, post-graduates, international students, and some new Lowers during the orientation period in September. The purpose of the test is to place students in the appropriate level of history study: (1) For most students, the HQT indicates that they should begin the 3-term U.S. history sequence (*History 30-T2* and *31*) in September of their Upper year. Students may, however, wait to begin the *History 30* sequence a term later (in January) or a year later (the following September). All these students are reminded that they may elect the fourth term of the requirement only after they have completed one term of the regular *History 30* sequence. (2) The HQT indicates that some students should begin the diploma sequence by taking *History 29-0* and then complete the 4-term requirement by taking *History 31* the following year. (3) For students who have already had a yearlong U.S. history course in the 11th or 12th grade at their previous schools, the HQT indicates how they should complete the 4th term of the requirement. (4) Finally, for students interested in taking *History 30* or

History 34 in the 10th grade, the HQT gives an indication of their chances for success. Either of these two courses counts toward the 4-term diploma requirement.

In all cases, individual placement is made by the department chair.

Washington Intern Program

The Department co-sponsors, with the Phillips Exeter Academy History Department, a special Spring Trimester (mid-March through late May) program in Washington for Seniors taking, or who have taken, *History 30-31*, and for Uppers in *History 30*. The program is restricted to 15 Andover students and 15 Exeter students, competitively selected, for work as interns in the offices of Senators and Representatives. The application process begins early in the previous fall trimester. Prospective applicants should avoid taking 0-yearlong courses. Uppers who are interns in the spring will take *History 31* during the fall of their senior year.

Phillips Academy Archives

The Department of History and the Social Sciences encourages the use of the Academy's extensive archival collection. For students who have completed *History 30-31* and are interested in pursuing work with the raw materials of history (including oral history), the Academy archivist offers a unique tutorial-research opportunity on some aspect of the history of Phillips Academy and Abbot Academy. Students undertaking archival study for credit should apply for an Independent Project through the Dean of Studies.

COURSES IN THE HISTORY OF THE WESTERN TRADITION

Five class periods a week. Primarily for Juniors, who are expected to take *History 16* before taking other courses in the department. Together, *History 16, 17, and 18* comprise a survey of Western civilization from earliest times to the beginnings of the modern world. Although the primary goal is familiarity with our western tradition, its institutions

and ideas, students will also be introduced to contemporaneous developments in the non-western world. Through the content of these courses, students will work on learning the skills and concepts vital to the study of history, and thus prepare for later, more advanced courses in this field.

- 16—1 (2161) **Ancient History**
 16—2 (2162)
 16—3 (2163)

Following an introductory unit on the nature of history, this course focuses on the course of human development from the prehistoric through the reign of Alexander the Great. Egypt will be studied as an example of early river valley civilizations, but the main focus of the course will be on Greece in the Hellenic and Hellenistic periods.

- 17—2 (2172) **Classical History**
 17—3 (2173)

This course continues the study of western civilization, concentrating attention on the Roman Republic and Empire, the advent of Christianity, and the rise of Islam.

- 18—3 (2183) **Medieval History**
 The final course in this sequence will concentrate on the medieval world: its culture, institutions, and legacy. Students will be exposed to such topics as the medieval church, feudalism, the arts, the emergence of nation-states, the origins of the economic revolution, and the background to the Renaissance. While focusing primarily on Europe, considerable attention will also be given to contemporaneous developments in other parts of the world.

COURSES IN THE HISTORY OF THE MODERN WORLD

Four class periods a week. Primarily for Lower. Together these courses comprise a survey of the modern world from the 14th to the 20th century. In each term, the focus will be on developments in both western and non-western worlds.

- 26—1 (2261) **The Early Modern World**
 A global perspective on the period 1500-1800. The course will survey developments in Europe and examine contemporaneous developments in Asia, Africa, and the Middle East. Special attention will be given to the interaction between Europe and a variety of non-western cultures during the age of exploration.

- 27—2 (2272) **The World in the Nineteenth Century**
 A global perspective on the period from 1800 to 1914. The course will survey developments in Europe, Asia, Africa, and the Middle East, giving special attention to the interaction between cultures in the western and non-western worlds.

- 28—3 (2283) **The World in the Twentieth Century**
 A global perspective on the period from 1914 to the present. The course will give special attention to the cultures of Asian and African peoples in the contemporary world.

REQUIRED SEQUENCES IN UNITED STATES HISTORY

- 29—0 (2290) **United States History**
 Four prepared class periods. For Uppers and Seniors so assigned by the HQT. The three terms are designed to cover the same material as *History 30-T2* — there is no increase in coverage. Emphasis is on skills-building. Students receive considerable individual attention, especially in their writing.

Completion of *History 29-0*, together with *History 31* in the senior year, satisfies the 4-term diploma requirement.

- 30—12 (2304) **The United States (T2)**
 30—23 (2305) (a two-term commitment)
 Four prepared class periods. For Uppers, Seniors, and exceptional Lower. This course, along with *History 31* and an elective at the 40-level, fulfills the four-term history diploma requirement. The first term emphasizes three goals: a survey knowledge of American history through Reconstruction by reading an advanced-level text; the acquisition of skills by daily exercises in reading, note-taking, and writing; and an in-depth study of an organizing theme. The second term emphasizes American industrialization from the post Civil War years to 1933. The goals of the first term continue, but the variety of readings and writings and the complexity of the materials increase.

- 31—1 (2311) **The United States**
 31—3 (2313)
 Four prepared class periods. For Uppers and Seniors. The focus is on the United States in the Depression, and during and after World War II. Prerequisite: successful completion of *History 30-T2*.

- 32—12 (2321) **United States History for**
 (2322) **International Students**
 Four prepared class periods. A course for students for whom English is a second language and whose HQT scores indicate they are not ready for *History 30-T2*. The course emphasizes language skills important to the study of American history and the subject matter focuses on the founding of the republic, constitution building

and how the American government works, the westward movement, the Civil War and the coming of urban-industrial, multiethnic America. The intention of the course is to recognize the special needs of the students and to bring them to a level of achievement so they may transfer to the 30/31 sequence in the winter or spring term, if the students wish to be candidates for the diploma.

SURVEY OF MODERN EUROPEAN HISTORY

34—0 (2340) Modern European History
Four prepared class periods. This course is open to exceptional Lowers (with permission from the department chairman) and to Uppers and Seniors, whether or not they have taken *History 30*. The course has proven to be good preparation for the Advanced Placement examination in European History. Successful completion of this yearlong course, together with a year of United States history (*History 30-31*), satisfies the department's 4-term diploma requirement.

The fall term consists of background survey of the 16th, 17th, and 18th centuries, with particular emphasis on the political, economic, and intellectual revolutions that helped to mold the modern world. The focus of the Winter Term is the period 1789-1914, with continuing attention given to the shaping of modern thought, the emergence of the nation-state, and the effects of industrialism. In the Spring Term, the course covers topics in 20th century Europe: the two World Wars, and their effect; the nature of totalitarianism; the cold war and the rise of the superpowers. Reading is from primary and secondary sources, as well as fiction. Maps and visual materials are used where appropriate.

ELECTIVES: 40-LEVEL SURVEYS IN INTERNATIONAL SOCIAL SCIENCE AND NON-WESTERN HISTORY

Any of these 40-level courses counts as the fourth term of the diploma requirement. **Prerequisite:** A student must have completed at least one trimester of *History 30* or have credit for U.S. history from another school before enrolling in a 40-survey.

SURVEYS IN THE SOCIAL SCIENCES

SS41—1 (2411) Introduction to Economics
SS41—2 (2412)

Four prepared periods. The course aims to introduce Seniors to the basic principles of economics and their application and relevance to current public policy issues. Students examine the development of the economies of the U.S. and the world, and are introduced to basic theoretical tools which help them analyze important econom-

ic issues. Classes consist primarily of discussions, although there will also be some role-playing exercises, computer simulations, class assignments, debates, guest speakers, films and student reports on their term projects. (Dr. Strudwick)

SS42
(Not offered in 1989-90.)

Urban Studies Institute

43—2 (2432) Comparative Government
43—3 (2433)

Through this course, students gain an understanding of the world's diverse political structures and practices. Students will study general political concepts and compare the governmental systems of such specific nations as Great Britain, the Soviet Union, China, France, Mexico, and Nigeria. In studying these nations, students will examine the political implications of different types of economic and social development.

Topics for class discussion include: the sources of political power; the role of tradition, culture, and ideology in the political process; the relationships between states, citizens, and society; and the process of political change. Students in this course will be able to take the AP examination in Comparative Government and Politics.

44—1 (2441) International Relations
44—3 (2443)

This course will focus on political and ideological clashes in the world since 1945. The course will examine conflicts in Asia, Africa, Central America, and the Middle East, and will analyze the attempts to resolve those clashes both by the peoples involved and by the superpowers. Primary sources, periodicals, films, and texts will be used. (Mr. Gurry)

SURVEYS IN NON-WESTERN HISTORY

45—123 (2451) The Russian Experience
(2452)
(2453)

This course, primarily for Seniors, but open to Uppers with the instructor's permission, is a survey of Russian history, literature and culture from medieval times to the present. In the Fall Term, the focus is on the development of ideas and institutions in Old Russia and the Imperial period, through much of the 19th century. In the winter, the subject is Russia in Revolution, covering the period 1880-1930, and in the spring attention is given to the Soviet Union over the last half-century. While any of these terms may be taken alone, students are urged to consider taking all three terms, since the course is taught as a whole, with the second and third terms building on the previous ones to develop the key themes in Russia's past and in particular to address the question of why Russian society has never developed the kind of democratic institutions with which we are familiar. Considera-

ble attention is given to the study of literature. The course examines the significant events and ideas of the Russian past and the reflection of these events and ideas in the fiction and memoirs of authors such as Pushkin, Gogol, Turgenev, Dostoevsky, Tolstoy, Chekhov, Gorky, Mayakovsky, Blok, Zamiatin, Babel, Mandelstam, Bulgakov, Solzhenitsyn and Ratushinskaya. (Mr. Richards)

See also Russian 13 in the Foreign Language section.

46—123 (2461) Asia: China, Japan, and India
(2462)
(2363)

Four prepared class periods. The fall term focuses on *Modern China*. After an introduction to traditional China's religions, thought, and institutions, the course concentrates on events since 1800, emphasizing China's response to the West, and economic, intellectual, and political developments through the rise of communism in the 20th century. The course will also analyze the origins and aftermath of the Cultural Revolution and China's current relationship with the rest of the world.

The Winter Term emphasizes *Modern Japan*. Today Japan has impressed many outsiders as a uniquely homogeneous, unified, and economically effective society. This course — through an examination of the evolution from traditional to modern Japanese society — will examine the validity of that perception. After an introduction to traditional thought and feudal social structure in Japan, the course looks closely at ideas, events and developments since 1800. Readings are from historical texts, contemporary observers, sociological descriptions and literature, with a special effort to understand the outstanding features of Japanese culture, politics and economics.

The focus of the Spring Term will be on *Modern India*. The course will examine India's rich cultural traditions and see how Indian society was affected by the intrusion of British imperial rule in the 19th century. In-depth attention will be given Gandhi, the movement for Indian independence, and an examination of India's literature and politics in the context of the world today.

47—3 (2473) Africa and the World
This course focuses on contemporary issues facing the new nations of Africa, based on an historical analysis of the emergence of Africa from the colonial period. Political and economic development of these countries, the relations between developed and developing states, the emergence of majority rule in Southern Africa, and the role of Africa in the United Nations is studied. Readings include analyses of the issues African nations confront in the modern world, novels about Africa, and speeches and articles by African leaders.

48—1 (2481) The Middle East
Four prepared class periods. Few if any regions of the world claim a more compelling interest than the Middle East. From its ancient site of half the earth's cultural ante-

cedents, birthplace of three world religions, land bridge of three continents, eternal East-West corridor, and ceaseless crossroads of conquerors, pilgrims, and traders, the Middle East derives a distinctive character of its own. This course traces the region's history from the Arab awakening to the present situation.

49—123 (2491) Latin American Studies
(2492)
(2493)

Four prepared class periods. This course is a survey of Latin American civilization seen through its history, literature and culture from pre-Columbian times to the present. In the Fall Term, the focus is on the Mayan, Aztec, and Inca civilizations, the Spanish Conquest, and the development of present day institutions and cultural patterns in the Iberian Colonial period. In the Winter Term, the students learn about Latin America's independence from Spain and Portugal, the republican experiment, the role of the military, the Church, the Oligarchy, and the function of class, sex and race in Latin American societies. In the Spring Term, the subject is political movements and revolutions of the 20th century, including the Mexican, the Cuban and Sandinista Revolutions. US-Latin American relations are an important component of the course in this term.

Each term can be taken independently, but students should consider taking all three terms since the course as a whole develops themes prevalent in Latin American history, in particular, the struggle against dictatorship, economic and social divisions, imperialism, and population growth. Films, and literary works of writers such as Garcia Marquez, Fuentes, Asturias, and Neruda will be used to understand how Latin Americans view their own reality. (Ms. Piana)

ELECTIVES: 50-LEVEL SURVEYS

The following 50-level surveys are open to Seniors and Uppers who have completed at least one term of *History 30*. A student may elect a 50-level survey together with or prior to satisfying the 4th term of the diploma requirement at the 40-level. Completion of three consecutive terms of *History 54* or *History 55*, together with three terms of *History 30-31*, satisfies the department's diploma requirement.

54—123 (2541) Modern European History
(2542)
(2543)

This course is identical in content to *History 34-0*. It is different in that it is open only to Uppers and Seniors who have completed at least one term of *History 30* and it may be elected for a single term.

**55—123 (2551)
(2552)
(2553) Ancient History**

Four prepared class periods. The course is concerned with Greek and Roman history from the Minoan Period to the beginning of the Medieval Period. Each term represents a coherent and independent unit. In the Fall Term the survey ends with the world empire of Alexander the Great. The Winter Term covers the period from the beginning of Rome until its transition from Republic to Empire. The Spring Term is concerned with the Roman Empire and the transition from Roman to Medieval History. (Mr. Krumpe)

ELECTIVES: 60-LEVEL SEMINARS

These 60-level electives are *seminars* for Seniors. Issue-oriented trimester courses, they meet three hours a week, with an expectation of substantial independent reading and writing. For effective discussion, they are limited to 14 students. **Prerequisite:** either (1) prior completion of the 4-term diploma requirement; or (2) written permission from the department chair. A student may elect a 60-level seminar together with or prior to satisfying the 4th term of the diploma requirement at the 40-level.

SEMINARS IN THE SOCIAL SCIENCES

SS61—3 (2613) Issues in Economics
Prerequisite: Successful completion of *Social Science 41*. This seminar investigates public policy issues in the field of economics. Students begin by studying the history of economic thought, relating it to our understanding of economic development. After examining the works of Adam Smith, John Stuart Mill, Karl Marx, Alfred Marshall, and John Maynard Keynes, the class addresses a series of current policy questions, such as the debates over the budget, tax reform, import restriction, supply-side economics, central economic planning, labor organization, national industrial policy, and the ethical responsibilities of business. Classes center around discussion of the assigned readings. A term paper on an issue of choice is required. There is no final examination. (Dr. Strudwick)

SS62—2 (2622) American Race Relations
This seminar investigates the development of racial attitudes in the United States. We discuss contemporary campus attitudes and examine the extent to which current concerns have evolved historically, studying the origins of racism in the British colonies, antebellum slavery in the American South, antislavery movements and anti-

ethnic restrictions in the North, and the urban migration of blacks and the life of Jim Crow in the 20th century. We look closely at the movement for civil and economic rights during the 1960s and give substantial attention to recent issues—how to reconcile assimilation with separation, Birmingham with Boston, *Brown* with *Bakke*, equality of opportunity with equality of result. A final paper is expected; there is no final exam. (Mr. Rogers)

SS64—2 (2642) Men, Women and American Culture
This seminar is designed to help students understand the experiences of men and women in American culture from the Victorian age to the present. Using interdisciplinary materials from social and intellectual history, psychology, anthropology, and literature, this course will explore how American culture has defined its ideals of masculinity and femininity since the mid-nineteenth century. We will study a variety of topics: Victorian sexuality; gender roles on the frontier; the "cult of true womanhood"; moral reform in the Progressive Era, manliness and the Strenuous Life, gender roles in the Roaring Twenties; the family and the Great Depression; the return of domesticity in the Fifties; and the pros and cons of the Women's Liberation Movement. The course will include lectures, films, discussion, guest speakers, exams, and several papers. Reading will include Peter G. Filene's *Him/Her Self: Sex Roles in Modern America*; and other books and articles. (Ms. Dalton, Mr. Rotundo)

SS65—2 (2652) Nuclear Weapons — Proliferation and Responses

This seminar follows the evolution of and reaction to The Bomb — from the discovery in 1938 of fission on Otto Hahn's table in Nazi Germany, to Hiroshima, the Cuban Missile Crisis of 1962, and the START Talks and cruise missiles and President Reagan's "Star Wars" speech in the 1980's. Historians, chemists, physicists, political scientists, and journalists are among those who tell the story, in lectures, documents, and secondary accounts. Readings include Richard Rhodes, *The Making of the Atomic Bomb*; Robert F. Kennedy, *Thirteen Days*; McGeorge Bundy, *Danger and Survival*; John Newhouse, *War and Peace in the Nuclear Age*; and Graham T. Allison et al., *Hawks, Doves, and Owls*. The course entails class discussions, field trips, films, readings, a research project, and a final exam. (Dr. Quattlebaum)

SEMINARS IN HISTORY

66 The Renaissance
(Not offered in 1989-1990.)

67—3 (2673) Victorian England: England in an Age of Expansion
(formerly *History 57*)

This seminar is devoted to a study of the major transitions and developments of nineteenth century Britain. It

is divided into three central components: economic and social developments; political movements; and international relations. Since Victorian literature more directly reflects the life and thought of the times than that of any other period of English history, the course includes an examination of those writers whose works were influential in either adapting or describing the minds and institutions of the English people to the changing conditions of the period. These writers include Hardy, Dickens and Marx. A term paper is expected; there is no final examination. (Mr. Richards, Dr. Strudwick)

68—2 (2682) **The Courts and Constitutional Development, 1935-1985**

This seminar focuses on the often conflicting rights of individuals and society as decided by the courts in the years 1935-85. What are the legal powers and limits of government to regulate the actions of individuals in the public interest? To what extent may government regulate private businesses relative to working conditions, consumer interests, or the environment? To what extent may the courts act to protect the rights of freedom of speech, press, assembly, and religion; rights against illegal search and seizure; rights of those accused of crimes; and equal rights to vote, education, employment, and housing opportunities regardless of race, religion or sex? The seminar examines the relationships between ethics and social values, political and economic developments, special interest groups, and the development of law. Students analyze the roles of lawyers and judges; legal procedures; the influence of special interests; and the arguments of prosecutors, plaintiffs, and defendants. The readings emphasize the case method by works such as Westin's *The Anatomy of a Constitutional Law Case*; Kutler's *The Supreme Court and the Constitution*; Lyons' *The Supreme Court and Individual Rights in Contemporary Society*; and, especially, Supreme Court decisions. The basic classroom procedure is Socratic dialogue, and the climax of each student's study is the critical analysis of a constitutional law case. (Mr. Lyons)

Mathematics

The mathematics curriculum is built around a core sequence of eight trimester courses: three of elementary algebra, two of geometry, one of intermediate algebra and two of precalculus topics. The completion of these eight trimesters will satisfy diploma requirements, but an additional trimester is required before entering the calculus. Placement of new students in the appropriate first course is made by the department considering the record in

previous schools, the results of a self-administered diagnostic test in elementary algebra which is sent to newly admitted students in the Spring, and the course program chosen by the entering student. Examinations to validate first and second year algebra skills are given early in the Fall trimester, at which time students who are incorrectly placed can be shifted to higher or lower level courses.

Students entering with no prior study of algebra start with *Mathematics 10*; those with a partial year of algebra enter *Mathematics 15*. Students entering with a full year of algebra start with *Mathematics 21-1*. If the results of placement testing indicate a need for *Algebra Review*, then students who have not taken geometry start with *Mathematics 19-1* and continue to *Mathematics 21-2*.

New students who have taken one year of elementary algebra and one year of geometry will satisfy diploma requirements by taking *Mathematics 32-1*, *34-2* and *35-3*. Those with a strong background in intermediate algebra may enroll directly in *Mathematics 34-1*. If, on the basis of our testing, the student's algebra skills are weak, then *Mathematics 25-12* may be required before precalculus.

It is generally best to take the College Entrance Examination Board Achievement Test (Level II) in Mathematics near the end of or immediately following *Mathematics 36*.

For students who wish to go beyond the required level, the department offers many electives, some of which lead up to and beyond the Advanced Placement Calculus Examinations of the College Board.

The standard sequence of mathematics electives starts with *Math 36* (trigonometry) and goes through the normal five-term calculus sequence of *Math 53* and *Math 54*. Some students might also include *Math 48* and/or *Math 41* in their "normal" sequences; others might do the Honors sequence and others might do only the *Math 51-52* calculus sequence.

Hand Calculators

Every student taking Mathematics or Physical Sci-

ence must have a suitable hand calculator capable of handling square roots, sines, cosines, reciprocals, logarithms and exponents. Any calculator with *sin*, *log* and inverse function keys is adequate for all course use.

COURSES LEADING TO SATISFACTION OF THE DIPLOMA REQUIREMENT:

10—0 (3100) Elementary Algebra

Five prepared class periods. A year-long course for students who have had little or no algebra. Stress is placed on an understanding of the elementary structure and language of the real number system, on the manipulative skills of simplifying expressions and solving first and second degree equations, and on the study and graphing of polynomial functions. Work is done with word problems, inequalities, irrational numbers, and right triangle trigonometry. **Prerequisite:** None.

15—12 (3154) Elementary Algebra (T2) (a two-term commitment)

Five prepared class periods. A two-term course for those new students whose knowledge and skills are not strong enough to enter the one-term *Algebra Review* or *Geometry*. **Prerequisite:** A half to a full year of algebra.

19—1 (3191) Algebra Review

Five prepared class periods. A course for students who enter with a full year of algebra whose knowledge and confidence indicate they need a brief review of algebra. **Prerequisite:** A full year of algebra.

21—1 (3211) Geometry

21—2 (3212)

21—3 (3213)

Five prepared class periods. A course for students who have had a strong ninth grade algebra course, but little or no geometry. This course is a thorough and systematic presentation of standard synthetic Euclidean geometry. Emphasis is placed on the need for precision and clarity in the writing of formal proofs. **Prerequisite:** A complete course in elementary algebra and good algebraic skills.

22—1 (3221) Geometry

22—2 (3222)

22—3 (3223)

Five prepared class periods. This course continues the work of Math 21, with increased emphasis on the algebraic/numerical aspects of geometry. **Prerequisite:** *Mathematics 21*.

25—12 (3254) Algebra Consolidation (T2) (a two-term commitment)

Five prepared class periods. A course for students with

one year of algebra and one year of geometry, whose algebra skills are not strong enough for placement in *Mathematics 32* or *34*. The course begins with a comprehensive review of elementary algebra, and concludes with topics in intermediate algebra (as listed in the course description of *Mathematics 32*). Students who do satisfactory work in this course enter *Mathematics 34* in the Spring. Students with a (T2) grade of 2 or lower in *Mathematics 25-12* enter *Mathematics 32-3* in the Spring.

31—0 (3310) Geometry and Precalculus

Five prepared class periods. A yearlong course for entering students who have completed an Algebra 2 course but have not studied geometry. The course covers Euclidean geometry (both synthetic and coordinate) and elementary functions (including polynomial, exponential and logarithmic functions). This course completes the diploma requirement and prepares students to enroll in *Mathematics 36*. **Prerequisite:** Credit for one year of elementary algebra and one year of intermediate algebra.

32—1 (3321) Intermediate Algebra

32—2 (3322)

32—3 (3323)

Five prepared class periods. Topics in intermediate algebra, including sets; properties of real numbers; factoring; fractional and negative exponents; radicals; absolute value; solutions of linear, quadratic, and radical equations and word problems. **Prerequisite:** *Mathematics 22*, or its equivalent.

34—1 (3341) Precalculus

34—2 (3342)

34—3 (3343)

Five class periods, four prepared and one unprepared. More topics in intermediate algebra, including quadratic inequalities, equations of lines and circles and tangents to parabolas. The emphasis of the course is upon functions and their graphs, on the composition of functions and their applications. **Prerequisite:** *Mathematics 32*, or its equivalent.

35—1 (3351) Precalculus

35—2 (3352)

35—3 (3353)

Five class periods, four prepared and one unprepared. A continuation of the study of functions, including polynomial, exponential, and logarithmic functions. Completion of this course satisfies the diploma requirement. **Prerequisite:** *Mathematics 34* or its equivalent.

40—12 (3404) Elementary Functions (T2) (a two-term commitment)

Five prepared class periods. A two-term course for entering Seniors whose prior work fails to satisfy diploma requirements. Work focuses on a review of the fundamentals of algebra, and the elementary functions. Students with high quality work in the Fall trimester may satisfy

the diploma requirements and take *Mathematics 50-23 (T2)*. **Prerequisite:** Credit for three years of high school mathematics.

ELECTIVE COURSES

Only courses with sufficient enrollment will be given.

36—1	(3361)	Precalculus - Trigonometry
36—2	(3362)	
36—3	(3363)	

Five class periods, four prepared and one unprepared. This is the standard course in circular and trigonometric functions with applications. It is required for those wishing to go on to *Mathematics 48* or the calculus. **Prerequisite:** *Mathematics 35*, or its equivalent.

Math 41, 42, 47 and 48 are non-calculus electives which may be taken either before beginning a calculus course or as alternatives to the calculus. Of these four courses, *Math 48* is the natural extension of the *Math 34, 35, 36* precalculus sequence, developing earlier work more deeply and strengthening a student's command of algebra and trigonometry. *Math 41, 42 and 47* are courses in non-continuous, discrete mathematics, an area of growing importance which is quite different from the precalculus/calculus sequence.

41—1	(3411)	Probability
41—2	(3412)	

Four prepared class periods. Includes sample spaces, counting problems, sampling, conditional probability, random variables, expected value, variance, standard deviation, binomial and normal distributions. The computer is used on applications that are too time-consuming to perform by hand and to simulate experiments for which there is no model. **Prerequisite:** *Mathematics 35* or its equivalent.

42—2	(3422)	Statistics
42—3	(3423)	

Four prepared class periods. Applications of various distributions, hypothesis testing, statistical inference and data organization. **Prerequisite:** *Mathematics 41*.

47—2	(3472)	Discrete Mathematics (Formerly <i>Math 37</i>)
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Four prepared class periods. This course provides exposure to some topics from the areas of discrete mathematics and finite mathematics such as mathematical induction, sequences, series, recursion, networks, circuits, annuities, amortization of loans, and fractal geometry. **Prerequisite:** *Mathematics 36* or its equivalent.

48—1	(3481)	Analytic Geometry
48—2	(3482)	(Formerly <i>Math 38</i>)
48—3	(3483)	

Four prepared class periods. This course is an extension of earlier work on lines and curves in the plane. It will include extended locus problems and further study of the conic sections: parabolas, ellipses and hyperbolas and their simple rotations. The course will include an introduction to the algebraic description of 3-space: vectors, curves, planes, simple surfaces and their intersections. **Prerequisite:** *Mathematics 36* or its equivalent.

50—23	(3505)	Beginning Calculus (T2) (a two-term commitment)
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Four prepared periods. This course, for Seniors only, does not specifically prepare for the Advanced Placement Examination. The approach to calculus is concrete, informal and applied, as opposed to abstract, deductive and theoretical. Topics include applications of the derivative and integral to problems of optimization, curve sketching, rate of change, area, volume, and work. Techniques will be developed to apply derivatives and integrals to logarithmic, exponential, trigonometric and inverse functions. **Prerequisite:** *Mathematics 36* or an equivalent course in trigonometry and elementary functions.

51—1	(3511)	AB Calculus (I)
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Five prepared class periods. Primarily for Seniors, but open to Uppers who choose not to do the standard *Mathematics 53-54* calculus sequence. The first of a three term sequence that covers the syllabus for the AB Advanced Placement Examination of the College Entrance Examination Board. Topics covered include: review of functions and graphing, limits and continuity, the derivative and its applications. **Prerequisite:** *Mathematics 36* or its equivalent.

52—23	(3525)	AB Calculus (II) (T2) (a two-term commitment)
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Five prepared class periods. This is a continuation of *Mathematics 51* and finishes the AB Advanced Placement Syllabus. Topics covered include: the definite integral, techniques and applications of integration, and the Fundamental Theorem of the Calculus. **Prerequisite:** *Mathematics 51*.

53—23	(3535)	BC Calculus (I) (T2) (a two-term commitment)
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(This two-term course replaces the previous one-term *Mathematics 53-3* course.) Four prepared class periods. This is the beginning of the normal five-term calculus course recommended for non-Seniors. With *Mathematics 54* it covers the syllabus of the BC Advanced Placement

Examination. Topics covered in the two terms include some differential and some integral calculus: limits, continuity, derivatives, The Chain Rule, related rates, The Mean Value Theorem, applications of integrals and The Fundamental Theorem of the Calculus. **Prerequisite:** *Mathematics 36* or its equivalent.

54—1 (3541) BC Calculus (II)
Five prepared class periods. This course continues the work of *Mathematics 53-23* in preparation for the BC Calculus Examination. Topics covered include further application of the integral calculus, volumes and arc length. **Prerequisite:** *Mathematics 53* or its equivalent.

54—23 (3545) BC Calculus (II) (T2)
(a two-term commitment)
Five prepared class periods. A continuation of *Mathematics 54-1* finishing the syllabus for the BC Advanced Placement Examination in May. Topics covered include: further techniques of integration, numerical approximations, infinite series, parametric equations and further differential equations. **Prerequisite:** *Mathematics 54-1* or its equivalent.

55—0 (3550) Honors BC Calculus
Five prepared class periods. A yearlong course in analytic geometry and calculus which begins only in the Fall. Enrollment is limited to very able and committed mathematics students. Satisfactory completion of this course prepares for the College Board BC Advanced Placement Examination. This course may require more than the standard 4 to 5 hours per week of homework. **Prerequisite:** *Mathematics 36* or its equivalent, and departmental permission.

65—1 (3651) Calculus of Vector Functions
Four prepared class periods. For students of demonstrated ability and interest. Vectors and the geometry of 3-space, functions of many variables, partial differentiation, tangent planes, gradients, vector valued functions and their derivatives. **Prerequisite:** *Mathematics 54*, or *Mathematics 55* or departmental permission.

65—23 (3655) Calculus of Vector Functions (T2)
(a two-term commitment)
Four prepared class periods. A continuation of *Mathematics 65-1* covering multiple integration and its applications in volumes, centers of mass, and surface area; vector analysis including line integrals and Green's Theorem; an introduction to linear algebra including Gaussian elimination vector spaces, and eigenvectors. **Prerequisite:** *Mathematics 65-1*

68—123 (3681) Honors Mathematics Seminar
(3682)
(3683)
Each term's seminar will be devoted to one topic which will be developed in depth. The term's topic will be announced the previous term and might be: Numerical Methods and Approximations; Non-linear Dynamical Systems - Instability, Chaos and Fractals; Abstract Algebra - Groups, Rings and Fields; Mathematical Models in the World Around Us, i.e., "The Mathematics of Conflict," "The Mathematical Theory of Elections," "Size, Shape and Patterns"; Number Theory. Participants need to be prepared to work on one topic in great detail and, in some seminars, to work as part of a team on the solution of problems. **Prerequisite:** *Mathematics 54*, *Mathematics 55*, or departmental permission.

COMPUTER COURSES

The Mathematics Department is located in Morse Hall, which also houses two computer labs. One lab has 16 IBM Personal Computers (networked); the second contains 7 Apple IIe microcomputers. A variety of computer courses is offered that range from an introduction to computers to preparation for the Advanced Placement Examinations in Computer Science. Computer languages taught include LOGO and Pascal.

Students who desire an introduction to computer programming but who have little or no computer experience normally enroll in *Computer 20* or *Computer 30*. Those who feel confident about their ability to work independently as they learn to program or who expect to enroll in higher level computer courses should choose *Computer 30*. Those who desire an overview of computing as they learn to program or feel that they need more interaction with the computer during class should choose *Computer 20*.

Computer	Computer Competence (LOGO)
20—1 (3821)	
20—2 (3822)	
20—3 (3823)	

Four prepared class periods. A one-term course in programming in the LOGO language for students with little or no previous experience with computers. The course focuses on some of the important applications of computers: graphics, word processing, and data management. Topics are introduced with commercial software packages. Then students design and program simplified versions of these packages. Design skills and user-friendly programming are stressed. This course does not qualify a student for *Computer 40* or *50*. **Prerequisite:** None. Not open to students from *Computer 30*.

Computer**Beginning Computer (Pascal)**

30—1 (3861)

30—2 (3862)

30—3 (3863)

Four prepared class periods. An introduction to structured programming using the Pascal language. The course introduces programming methodology and its problem solving techniques along with the basic forms of Pascal. Students will learn to write programs of moderate length and to use the program development system. This course qualifies a student for *Computer 40* or *Computer 50*. **Prerequisite:** *Mathematics 22 (Geometry)*.

Computer**Intermediate Computer (Pascal)**

40—2 (3902)

40—3 (3903)

Four prepared class periods. For students with programming experience in Pascal. The course continues the practices and disciplined approach to problem solving introduced in *Computer 30*. Various standard algorithms such as searching and sorting will be introduced. The syllabus will be guided by the course description of the A Advanced Placement Examination in Computer Science. **Prerequisite:** *Computer 30* or permission of the department.

Computer**Computer Science**

50—1 (3951)

Five prepared class periods. The first term of a yearlong course in algorithms and data structures using primarily the Pascal language. The emphasis will be on programming methodology and some standard algorithms. The curriculum will be guided by the course description of the College Board AB Advanced Placement Examination in Computer Science. This course may require more than the standard 4 to 5 hours per week of homework. **Prerequisite:** *Computer 30* or permission of the department.

Computer**Computer Science (T2)**

50—23 (3955)

(a two-term commitment)

Five prepared class periods. Continuation of *Computer 50—1*. The emphasis will be on data structures and larger programs. This course completes the preparation for the AB Advanced Placement Examination in Computer Science. This course may require more than the standard four to five hours per week of homework. **Prerequisite:** *Computer 50—1*.

Music

The diploma requirement in Music for entering Juniors and Lower Middlers is one trimester of music, which is satisfied by *The Nature of Music (Music 20, 21 or 22)*. This course is also a prerequisite for

courses in the History and Appreciation and the Theory categories, but is not a prerequisite for the Applied category. Entering Upper Middlers must take a trimester course in Music or Art at the Academy: *Music 20* or its equivalent.

Entering Seniors need not take a Music course. Exemption from *Music 20* as a prerequisite is granted on the basis of an exam and/or by permission of the department chairman. However, there is no exemption for the Music diploma requirement.

See also **The Renaissance** (History 66) in the listings of History and the Social Sciences.

APPLIED

15—123 (6151)

(6152)

(6153)

Fidelio Society

Pass/Fail. Three prepared periods. Open to all classes. This small group of mixed voices is selected from the *Chorus (Music 17)*. It performs on numerous occasions throughout the year both on *Chorus* programs and on its own. Its repertoire includes music of all types, early and modern, sacred and secular. Membership is by audition and is conditional upon good standing in the *Chorus*. This course, if failed, cannot be made up by examination.

16—123 (6161)

(6162)

(6163)

Band

Two double periods. Open to all qualified students. Tryouts are held any time before the beginning of a term to test the student's ability and to arrange for seating. There are some school-owned instruments available for student use. All types of music for wind ensemble are rehearsed. It includes marches as well as classical, popular, and show music. Much sight reading is done, and at least one public concert per term is given. This course, if failed, cannot be made up by examination.

17—123 (6171)

(6172)

(6173)

Chorus

Two double periods. Open to all qualified students. The *Chorus* is the Academy's major singing group, comprised of mixed voices, and performs a variety of choral works, both sacred and secular. No previous choral experience is necessary; just a desire to work hard and enjoy a unique choral experience. This course, if failed, cannot be made up by examination.

18—123 (6182) Chamber Orchestra
(6183)

Two double periods. Open to all classes. Most of the music played is for string orchestra; the best winds in the school are invited to join for larger works. While *Chamber Orchestra* may be elected as a credit-bearing course, it is also an activity in which all are invited to participate. This course, if failed, cannot be made up by examination.

19—123 (6191) Private Instrument and
(6192) **Vocal Lessons**
(6193)

Two class meetings plus required concert attendance. Lessons are available on all orchestral instruments including, in addition, piano (classical or jazz), guitar, saxophone, organ, harpsichord, carillon, and voice.

In addition to practicing daily, the credit students are expected to meet the following commitments: 1) a once per week meeting with their private instructor; 2) a once per week seminar, providing a broader practical/theoretical background; (credit students would be assigned seminar groups according to their instrument and background); 3) a required attendance of three concerts, on campus, per term.

There is a charge of \$240 per term for half-hour instruction, or \$330 per term for full-period (45 minute) lessons, and a nominal fee for use of practice pianos and organs. Orchestral and band instruments are available for rental. NOTE: Beginners (as defined by the department) **MUST** take two consecutive terms of *Music 19* if they are enrolled as credit students. This course, if failed, cannot be made up by examination.

20—1 (6201) The Nature of Music
20—2 (6202)
20—3 (6203)

Five prepared class periods. This course is designed to give a general background in history, theory, and practical aspects of music. Music from its earliest sources to the present is examined. Also, the role of music and the arts in each of its cultural stages is studied. Students receive some first hand experience with musical instruments. No previous experience in music is required.

21—1 (6211) The Nature of Music (for Juniors)
21—2 (6212)
21—3 (6213)

This course covers the same material as *Music 20* (see above), but is designed specifically for those Juniors whose verbal and writing skills may be weak. Juniors with no such demonstrated weaknesses may take *Music 20*.

22—2 (6222) Nature of Music —Advanced/
22—3 (6223) Chamber

Five class periods. An alternative course to *Music 20* for advanced music students with proficiency on their individual instruments. Students will study musical styles,

periods, and literature through in-class performance, analysis, and discussion of chamber music. Homework will consist of practicing individual parts, listening to recorded performances, and studying scores. The course aims not only to encourage chamber music performance, but also to prepare students for the Music Listening and Literature Advanced Placement Examination in May. **Prerequisite:** Permission of the Department. (If a student intends to take the A.P. in Listening and Literature, he/she is strongly advised to take *Music 33* as well as *Music 22*.)

HISTORY AND APPRECIATION

The Nature of Music (Music 20, 21 or 22) is a **prerequisite** for all courses in this section.

26—23 (6262) Seminar in the History of Music
(6263)

Two class meetings. Open to Lower and Upper Middlers and to Seniors. This course, taught in seminar fashion, is one where a great deal of reading, listening, and analysis is expected to take place outside the classroom. The composer or composers and era to be studied each term will be decided by the class and the instructor. (Sample topics: Beethoven and the Era of Revolution; The Life, Times and Music of J.S. Bach.) Hours to be arranged.

27—123 (6271) Independent Study in the History
(6272) **and Literature of Music**
(6273)

Four prepared class periods. Open to Upper Middlers and Seniors. A student who has taken at least one trimester of *Music 26* may, with the permission of the instructor, pursue an independent course of study in either a particular type of music or a particular period of music.

28—3 (6283) Jazz
Four prepared class periods. Open to Upper Middlers and Seniors. A study of the history of classic jazz, dating back to its roots in Africa, its development in New Orleans, its spreading to New York and Chicago, and its influence on music today. A survey of ragtime, blues, Dixieland, fox-trot, on through the big band era of the thirties, concluding with the jazz rock of today. A study of the influence and contributions of the major personalities such as W.C. Handy, Jelly Roll Morton, Louis Armstrong, Basie, Whiteman, Gershwin and the rest of the greats.

29—3 (6293) Opera
Four prepared class periods. A study of perhaps the richest of all musical genres and one which lends itself to discussion and analysis. The course will focus, after a brief survey, on four major operas from different periods: typically Baroque, Classical, Romantic and modern. Study will be made of the text, in translation, if necessary, the

composer's style, the special relationship between words and music and the background to a performance. Selection will be based on which operas are being performed in Boston and what is available on film or video.

THEORY

The Nature of Music (Music 20, 21 or 22) is a **prerequisite** for all courses in this section.

32—23 (6322) Conducting (6323)

Hours to be arranged. Open to Upper Middlers and Seniors. A course in conducting and basic musicianship. This course is designed to give the student an introduction to the conductor's world through developing conducting skills and score analysis.

33—1 (6331) Theory of Music I

Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors. This course offers an introduction to harmonic progression, triads, modes, rhythmic coordination with dictation. Some original work is also expected.

34—2 (6342) Theory of Music II

Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors. Prerequisite: Theory of Music I or permission of the instructor. This course deals with harmonic progressions, modulations, figure bass, and an introduction to counterpoint and harmonic analysis.

35—3 (6353) Theory of Music III

Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors. Prerequisite: *Theory of Music II* or permission of the instructor. This course includes advance figure bass, more complex chords, and a brief introduction to nineteenth and twentieth century techniques.

36—1 (6361) Electronic Music

36—2 (6362)

36—3 (6363)

Four prepared class periods. Prerequisite: *The Nature of Music* (Music 20) or permission of the Department Chairman. A course for the benefit of those who seek to expand their domains of creativity by understanding and utilizing the conceptual approaches inherent in electronic music synthesizers and related equipment. Using a practical approach, the course begins with the care and feeding of the tape recorder and proceeds to the functioning and operation of electronic music modules. A lab fee of \$15.00 is charged for the use of the synthesizer.

40—123 (6401) Advanced Techniques in (6402) Electronic Music (6403)

Four prepared class periods. Prerequisite: *Electronic Music* (Music 36). A course designed for the continuation of the skills and techniques developed in Music 36. A lab fee of \$15.00 is charged for the use of the synthesizer.

Philosophy and Religious Studies

The Department seeks to initiate students into three distinctive human quests: the search for meaning, the search for justice and the search for the foundation of knowledge. The process of initiation is intended not only to provide an introduction to outstanding literature in the field but also to assist the student in effecting a personal appropriation of the search and in developing the necessary skills for its pursuit. Active class participation is an essential part of this process. **Hence failed courses usually cannot be made up by examination alone.**

The department diploma requirement is successful completion of any one-trimester course; this requirement applies only to those who attend Phillips Academy for three or four years. Courses are offered at a variety of levels. All courses involve four prepared class period.

20—3 (7203) The Biblical World View: An Introduction

Four prepared class periods. Open to Juniors and Lower Middlers. Why was the world created? Why are we humans placed on this earth? What are we like? What should we try to achieve in life? How should we treat one another, other creatures, and the planet on which we live? For many centuries the Bible provided for many people a response to such questions. In our day, however, the message has become both unclear and increasingly unfamiliar. In this course we shall look at the composition and the historical setting of the Bible (Old Testament), then read selected passages of Biblical narrative and reflection which introduce persons and principles central to the Biblical view of the world, its inhabitants, and its Creator. (Rabbi Gendler)

21—1 (7211) Introduction to Ethics:

21—2 (7212) Discernment and Decision

21—3 (7213)

Four prepared class periods. Open to Juniors and Lower

Middlers. Beginning with concrete moral dilemmas and drawing case studies from literature, bioethics and education, this course provides an introduction to ethical reasoning. Specific attention is paid to the thinking of one classical philosopher (Socrates) and one modern utilitarian (Peter Singer). (Dr. Avery)

23—1 (7231) The New Testament Perspective
Four prepared class periods. Open to Juniors and Lower Middlers. The course will consider, in their cultural and historical context, the person and teaching of Jesus of Nazareth, the development of the early Christian community and the religious claims of that community concerning the Christ. (Fr. Gross)

24—2 (7242) Religious Discoverers
Four prepared class periods. Open to Juniors and Lower Middlers. The experiences of a handful of individuals have exerted an extraordinary influence on the life of the world. These individuals can be called religious discoverers, each of whom has forged a vision of how life should be lived, that persons, communities and whole cultures have found compelling for a thousand years or more. We will examine three such discoverers: Jesus, Moses and Buddha. We will study how their lives have provided exemplary models for living for the religious traditions they represent. (Ms. McCaslin)

30—1 (7301) Introduction to Non-Western Religions
30—2 (7302)
30—3 (7303)

Four prepared class periods. Open to Lower and Upper Middlers and Seniors. This course provides a brief introduction to four of the world's major religions: Islam, Hinduism, Buddhism, and Taoism. Huston Smith's classic, *The Religions of Man*, is the text. Additional readings are drawn from basic religious texts of the traditions. (Ms. McCaslin and Rabbi Gendler)

32—2 (7322) Post-Biblical Jewish Thought: Responses to the Holocaust
Four prepared class periods. Open to Lower and Upper Middlers and Seniors. An exploration of the holocaust through diaries, memoirs, works of fiction, poetry, and later reflections on the phenomenon.

Questions to be dealt with will include: what was it like for the victims? What was it like for the Nazis? How could it have happened? What elements from Jewish, Christian and secular tradition contributed to its possibility? What have been some of its effects on our own feelings about life and human beings? How have various Jewish, Christian, and secular thinkers responded to the challenge of this event? (Rabbi Gendler)

33 Varieties of Religious Experience
(Not offered in 1989-90.)

36—1 (7361)
36—2 (7362)
36—3 (7363)

Proof and Persuasion

Four prepared class periods. Open to Lower and Upper Middlers and Seniors. A practical introduction to informal logic and to the philosophical study of language. Some of the questions raised are: What is the difference between a good argument and a poor one? What are the common fallacies of thought? What are the limitations of logic? What is the meaning of "meaning" and the truth about "truth"? The course stresses the development of individual skill in argument and includes a critical examination of the patterns of thought one encounters every day in magazines, newspapers and on television. (Mr. Hodgson)

41—1 (7411)
41—3 (7413)

Views of Human Nature

Four prepared class periods. Open to Upper Middlers and Seniors, and to Lower Middlers with permission of the instructor. A critical examination of selected traditional and contemporary views of human nature with the following questions in mind: Do we have a characteristic nature? What are our basic needs, purposes, rights, obligations and values? To what extent are our actions determined by heredity and instinct? Are we free? Are we responsible for our actions? Do the answers to any of these questions differ for males and females? Given an understanding of human nature, how should we structure society to satisfy our needs and take advantage of our potential? Class discussions and written exercises are designed to encourage participants to develop views of their own against a background of a basic understanding of the readings. These include selections from the *Bible* and Plato's *Timaeus*, *Walden Two* by B. F. Skinner, *On Human Nature* by E.O. Wilson and *The Politics of Experience* by R. D. Laing. (Mr. Hodgson)

43—1 (7431)
43—2 (7432)

Law and Morality

Four prepared class periods. Open to Upper Middlers and Seniors, and to Lower Middlers with permission of the Instructor. A critical examination of issues that arise out of the relationship between law and morality. Questions of concern include: For what reasons, if any, should an individual obey or disobey the laws of society? Which kinds of governments (monarchy, aristocracy, democracy, etc.), if any, are legitimate? To what degree should society restrict the freedom of individuals through laws on matters like abortion, pornography, race and sexual relations? Class discussions and written exercises are designed to encourage participants to develop views of their own against a background of basic understanding of the readings. These include selections from the works of Plato, Hobbes, Rawls and Martin Luther King, Jr. (Mr. Hodgson)

44—3 (7443) Nonviolence in Theory and Practice

Four prepared class periods. Open to Upper Middlers and Seniors. The militarily most destructive century in human history, our twentieth century, has also been one in which such men as Gandhi and Martin Luther King, Jr., have successfully applied nonviolence to conflict situations. What is the theory of this approach to human conflict? What are some of its psychological assumptions? What is its religious and human significance? By what means does it operate? What are its prospects for the age ahead? We shall use case histories, the testimonies of those directly involved in such struggles, films, critical and theoretical studies in trying to clarify and comprehend some of these elements of nonviolence. Readings include Joan Bondurant's *The Conquest of Violence* as well as writings of Gandhi and King. (Rabbi Gendler)

45—2 (7452)**In Search of Meaning****45—3 (7453)**

Four prepared class periods. Open to all Upper Middlers and Seniors and to Lower Middlers with permission of Instructor. The reflective person is confronted with questions that hunger to be answered yet elude definitive, "objective" answers. The person's faith is often what sustains him/her and provides "subjective" answers to these fundamental questions. The issues of creation, of death, of evil, of identity, of purpose all challenge one's faith. This course (which takes its title from Victor Frankel's book) will consider these issues from a faith perspective using Scripture, literature (i.e. *Equus*, *No Exit*, *The Little Prince*, *The Shadowbox*, *Man's Search for Meaning*, *I Heard the Owl Call My Name*, etc.) and other materials. (Fr. Gross)

46—1 (7461)**Bioethics: Medicine****46—2 (7462)**

Four prepared class periods. Open to Upper Middlers and Seniors. Is a physician's confidentiality absolute? When can we experiment on human beings? How should we treat defective newborns? Should the government be telling doctors what they may and may not do? What about the Hippocratic Oath? Who should set the ethical standards for medicine? What is ethics anyway? Considering these and other questions, through case studies, discussion and readings, this course provides a brief introduction to moral philosophy, its application to issues in medicine and medical research and its role in setting public policy. (Dr. Avery)

47—3 (7473)**Bioethics: The Environment**

Four prepared class periods. Open to Upper Middlers and Seniors. Do only humans have rights? Do animals count? Should trees have standing? What is the value of wilderness or a salt marsh? Have we any obligations to rivers and mountains and birds of the air? Considering these and other questions, through case studies, discussion and readings, this course provides a brief introduc-

tion to moral philosophy, its application to environmental issues and its role in setting public policy. (Dr. Avery)

50—2 (7502)**Existentialism**

Four prepared class periods. Open to Upper Middlers and Seniors. The term "existentialism" covers a broad range of attitudes and values that are joined together by an emphasis on human existence. The authors brought together in its name share a characteristic concern for the problems of meaning, identity and choice that confront men and women in everyday life. The lectures, discussions and readings are designed to help us locate and express these problems as they confront each of us in our own lives and to assist in understanding and resolving them by drawing on the experiences and insights of the major existentialist thinkers. Readings: Nikos Kazantzakis, *Zorba the Greek*; Friedrich Nietzsche, *Thus Spake Zarathustra*; Jean-Paul Sartre, *No Exit* and *Being and Nothingness*; Soren Kierkegaard, *The Sickness unto Death*; Martin Buber, *I and Thou*. (Mr. Hodgson)

51—1 (7511)**In Search of Justice:****51—2 (7512)****from Socrates to Marx****51—3 (7513)**

Four prepared class periods. Open to Upper Middlers and Seniors. Who or what decides if my behavior is just? God, nature, the powerful, society, my emotions, the economic system? What is justice anyway? Or is the whole question a logical mistake? Through reading and discussion the course encourages participants to develop their own views on these issues in dialogue with Plato, Aristotle, Bentham, Mill, Marx and others, so that they will be better equipped to make their own contribution to the never ending search for justice. (Dr. Avery)

52—3 (7523)**Great Philosophers**

The great philosophers challenge us to address difficult and fascinating questions that perennially face mankind: What is the good life? What are the sources of human experience? Is there anything we can know with certainty? Does God exist? What is the relationship between my mind and my body? This course critically evaluates the responses of Plato, Descartes, Hume and Whitehead. (Mr. Hodgson)

Physical Education

All Juniors and new Lowerers are required to elect one trimester of *P.E. 10* in addition to their regular athletic commitment.

10—1 (9201)**Physical Education****10—2 (9202)****10—3 (9203)**

Pass/Fail. Limit of 15 students per section. Five class pe-

riods per week. A course integrating health and fitness concepts with self-testing and challenge activities; two class periods per week are spent using the running track, weight room, ropes course and other areas of the athletic complex. Two class periods are devoted to drown-proofing survival swim technique and C.P.R. training. One period per week is lecture-discussion, requiring some outside reading or other preparation. If the course is failed, the student will repeat it, in full or in part, during a subsequent term. Students should not enroll in this course unless they are able to swim.

Psychology

The Psychology Department offers two elective courses which examine fundamental concepts in the field. Particular emphasis is placed on helping the student explore the interface between psychological knowledge and personal growth. This is accomplished by utilizing teaching strategies which integrate formal academic work with frequent opportunities for student participation and self-exploration.

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|------|--------|--------------------------------|
| 32—1 | (7021) | Introductory Psychology |
| 32—2 | (7022) | |
| 32—3 | (7023) | |

One double period and two prepared class periods; for Uppers and Seniors. A survey course designed to introduce the student to the complexity and diversity of psychological inquiry. Emphasis is placed on the application of basic psychological principles to individual experience in order to expand awareness of both self and others. In addition, the broader implications of psychological findings for an integrated understanding of human development and behavior are considered. Topics to be covered may include: psychoanalytic, behavioral and humanistic theories of the person, psychosocial, cognitive, moral and early childhood development, human motivation and personality, abnormal behavior and research techniques in psychology. Lectures are designed to catalyze discussion. A combination of objective examinations and individualized writing assignments are utilized to evaluate the student's learning.

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|------|--------|---------------------------------|
| 33—3 | (7033) | Developmental Psychology |
|------|--------|---------------------------------|
- One double period and two prepared class periods: for Uppers and Seniors. An examination of human growth and development from infancy through adulthood. The role of early experiences and biological factors in later formation of personality, intellectual and motivational behaviors will be considered. Different theoretical per-

spectives (psychodynamic, social learning and biological) of psychological development will be examined as they relate to developmental milestones. Among the theorists to be studied are Piaget, Erikson, Freud, Gilligan, Bandura, and Vaillant. The format of the course includes readings, films, quizzes, and a term paper.

Science

The diploma requirement in science for members of the classes 1989 and 1990 is one yearlong course in either biology, chemistry, or physics. However, all students are strongly urged to study in each of these three areas. The order in which biology, chemistry, and physics is taken will have to vary with a student's degree of mathematical sophistication, previous science courses, and interest. Distribution among these sciences may be attained by yearlong courses or term-contained electives. Each department also offers advanced courses for students who wish to add depth to their science studies.

For members of the class of 1991 and for all students entering as of, and subsequent to, September 1988, the requirement is a yearlong course and three additional terms of science. At least one of those terms must be in the biological sciences if the yearlong course were chemistry or physics and, conversely, at least one of the term-contained courses must be in physics or chemistry if the yearlong course were in biology. With the exception of yearlong laboratory courses, one term-contained science course taken as a Junior will count toward the diploma requirement. Two yearlong courses will, of course, fill the requirement as long as one of the courses is in biology and the other is in either chemistry or physics.

For those students entering as Juniors, we suggest that: 1) those Juniors who have already experienced success in a junior high science course consider taking *Chemistry 25*, *Biology 30*, or *Physics 20*, subject to approval by the appropriate department chair; 2) those Juniors who have little science background and who need to develop basic skills-

should take *Physics 10* or *Chemistry 11*; 3) those Juniors who find themselves more interested in studying science in the context of a particular topic should take *Biology 15, 17*; or *Physics 18*.

Biology

The Biology department offers a number of term-contained courses primarily for Juniors, each of which explores a particular topic through classroom and laboratory or field work. Juniors who wish to enroll in *Biology 25* or *Biology 30* MUST obtain permission from the department chairperson.

15—1 (8051) Introduction to Oceanography
Four prepared class periods. This is a one-term course for Juniors who have not taken *Biology 25* or *Biology 30* or their equivalent. The 70% of our earth's surface comprising the oceans is examined from a number of biological, physical and chemical perspectives. Accordingly, we investigate the origin of the oceans and interactions among the thousands of living organisms found in or near the sea. Films and slides complement the classroom portion of the course. Special emphasis is given to the biology of sharks and whales.

17—2 (8072) Introduction to Zoology
Four prepared classes per week, one of which will be used for laboratory work. This is a one-term course designed for Juniors who have not taken *Biology 25* or *30* or their equivalent. A study will be made of the similarities and differences among the major animal divisions from the most primitive invertebrates to the most complex vertebrates. Areas of concentration will include the basic systems of each phylum (*i.e.*, digestion and reproduction), as well as the ecological role and the evolutionary development of the organism. Lab periods will be used to develop techniques of dissection while studying the anatomy of animals from selected phyla.

The Biology department offers two yearlong introductory level courses, each of which satisfies the diploma requirement for a laboratory science. Juniors who wish to enroll in *Biology 25* or *Biology 30* MUST obtain permission from the Department Chairperson.

A student entering Phillips Academy as a Lower, Upper, or Senior who wishes to receive Biology credit on the strength of a course taken in the 9th

grade at another school may do so upon passing a validation test to be administered after the student arrives at Andover.

25—0 (8120) Introduction to Biology
Three prepared class periods and one double laboratory period each week. This course is intended primarily for Lower Middlers with little previous exposure to science. A topics approach usually centered around laboratory experiences is employed in order to acquaint students not only with fundamental biological principles but also with the methods and techniques used to elucidate them. Attention is paid to the processes by which scientific evidence is gathered, interpreted, and summarized. Part of the Spring Term is set aside for work on individual or small group laboratory research projects. (This course is not open to Seniors.)

30—0 (8130) College Biology
Three prepared class periods and one double laboratory period each week. This is a survey course for those students with previous exposure to some of the basic principles of science. It stresses the unity of life, rather than the diversity, by emphasizing the functions common to all living things. It covers, in plants, animals, and microorganisms, the fundamental principles of metabolism (including nutrition, gas exchange, materials transport, excretion, and homeostasis), responsiveness and coordination, reproduction and development, genetics, evolution and ecology. Part of the Spring Term is set aside for work on individual or small group laboratory research projects. The text is *Biosphere* by Wallace, King and Sanders, or a similar college-level text. Uppers or Seniors who want to be in a fast-moving section for older students should so indicate on their COURSE SELECTION form.

31—2 (8142) Human Biology
Five prepared class periods, of which at least one will be in the laboratory, each week. This one-term survey course is for Uppers and Seniors who have not had *Biology 25* or *30* or previous credit in Biology. It stresses the principles of human physiology including: nerve and muscle function, nutrition, gas exchange, material transport, the immune system, excretion, homeostasis, and human reproduction and development. The course will also expose students to recent developments in molecular genetics and their relation to human physiology.

Since the breadth and depth of coverage are similar to that in the Winter Term of *Biology 30*, students who take *Biology 31* will not be able to take *Biology 25* or *30* subsequently. *Biology 31* may be taken for one term only.

41—1 (8211) Ecology (Formerly Biology 36)
Three class periods and one double field or laboratory period each week. For Uppers and Seniors who have completed a yearlong science course. This course will ex-

amine ecosystems, energy flow and populations, and will take an interdisciplinary approach to problems of societal concern such as pollution, population growth, environmental ethics, and food supply. A project or short paper will be required.

42—1 (8221) Animal Behavior
42—3 (8223) (Formerly Biology 47)

Three class periods and one double laboratory period. Open to Uppers and Seniors who have had one year of laboratory science. The course is designed to familiarize the student with the basic principles of animal social behavior. The topics which receive the greatest emphasis are: territoriality, altruism, mating strategies, courtship, parental behavior, migration, dominance, and the evolution of behavior patterns. Throughout the course, an effort is made to relate the behavior of animals to the behavior of humans. A project or a research paper will be required.

45—3 (8233) AIDS and Other Modern Diseases
 (Formerly Biology 32)

Four prepared class periods. Open to uppers and seniors who have had one year of laboratory science. This lecture course will examine public health threats posed by selected microorganisms. From AIDS and herpes to strep throat and the common cold, bacteria and viruses affect our quality of life and are major obstacles to Third World development. We will study the biology and epidemiology of these microorganisms and how to keep ourselves healthy, leading to an awareness of personal and global public health issues. The biology of AIDS and its unique properties as a disease will provide one important focus for the course.

Students who plan to take the Advanced Placement examination in Biology should see the Department Chair early in their Lower year. Because of recent changes in the approach of the AP exam, we have chosen not to offer a course specifically directed at Advanced Placement. Students who are particularly interested in Biology are encouraged to take *Biology 30* as Juniors or Lowers, followed by a year of Chemistry and a year of Physics, and then to take those advanced Biology courses which interest them. 50-level courses are open to Uppers and Seniors who have had *Biology 30* or its equivalent, whether or not they plan to take the AP exam.

51—1 (8251) Evolution and Ecology
51—3 (8253)

Prerequisite: *Biology 30* or the equivalent. Three class periods and one double field or laboratory period each week. Evolution is a major unifying theme in biology,

and the mechanism of natural selection serves as a foundation for examining ecosystems, energy flow, succession, and relationships between populations. Problems of societal concern such as pollution, population growth, environmental ethics, and food supply will be discussed. A short library research paper will be required. This course may require more than the standard 4 to 5 hours of homework per week.

53—1 (8261) Molecular Biology

Prerequisite: *Biology 30* and one term of chemistry or permission of the instructor. Three prepared classes and one double laboratory period per week. Following a brief review of chemical principles, the course examines the major classes of biomolecules and how they are synthesized and degraded in the cell. Particular emphasis is placed on those reactions which are associated with energy conversion pathways such as respiration and photosynthesis. Enzyme function is considered both in terms of mechanisms of action and with regard to kinetics. The relationship between structure and function at the molecular level is emphasized in studies of molecular genetics and the control of genetic expression. This course may require more than the standard 4 to 5 hours of homework per week.

54—2 (8272) Human Physiology
54—3 (8273)

Prerequisite: *Biology 30* or the equivalent. Five prepared classes per week. An in-depth consideration of some of the major systems of the human body, this course offers an opportunity to learn how to read and study from a challenging college level text; the reading is dense, the terminology must be selectively appreciated, and the regulatory mechanisms discussed are complex. Lab work may include the dissection of a cat or appropriate experiments. A short library research paper will be assigned. This course may require more than the standard 4 to 5 hours of homework per week.

60—2 (8282) Biology-Chemistry Laboratory

This is a course in LABORATORY RESEARCH. Open to Seniors and Uppers. Permission of the Department Chair is required. **Prerequisite:** one year of biology and one year of chemistry. Meets three double periods a week. Students in this course will learn laboratory techniques for working with bacteria, viruses, and perhaps tissue culture. Experiments will center on the molecular genetics of microorganisms, including the isolation, cutting and splicing of DNA by recombinant DNA biotechnologies. After learning a core of methodologies which are used in professional labs, students will apply them to short, focussed research projects in microbiology.

Finally, students may use this course as a springboard for a Westinghouse project, which would be ac-

complished at a professional lab during the following summer. Reading articles in scientific journals as appropriate would be part of a student's research. Students will also be asked to keep a lab journal and to write a final paper.

Chemistry

11—1 (8311)
11—3 (8313)

Elements and Compounds

Five class periods per week. Open to Juniors. This is a lab centered course in which students are introduced to beginning chemistry in a variety of ways such as: the study of measurement and density, the synthesis of an alloy and of the salt alum, the use of alum (a mordant) to dye wool with student made dyes and the synthesis of paint. These lab experiences form the vehicle for learning about chemical formulae, chemical reactions, chemical arithmetic (stoichiometry), and the nature of light absorption (color).

25—0 (8420)

Introduction to Chemistry

Prerequisite: Completion of *Mathematics 10* or the equivalent. For Lower Middlers, Upper Middlers and Juniors with permission of the Department Chair, who have NOT completed their Phillips Academy mathematics requirement. Five class periods per week. An introduction to the chemical view of the material world, including atomic theory, atomic structure, chemical reactions, the nature of solids, liquids, gases, and solutions, acid-base theories, electrochemistry, and the chemistry of the organic compounds. Making connections between chemical principles and everyday life will be emphasized. One or two class periods per week will be devoted to laboratory work.

30—0 (8430)

College Chemistry

Prerequisite: Five class periods. Co-requisite: registration in at least *Math 32* or its equivalent. This course is an introduction to the theoretical framework of modern chemistry, including atomic structure, chemical bonding, phase changes, solutions, chemical reactions, thermodynamics, kinetics, general equilibria, acid-base equilibria, electrochemistry, and aspects of inorganic and organic chemistry. These topics are treated with greater depth than in *Chemistry 25*. Emphasis is placed on developing problem solving and understanding the experimental basis of theories. Text is *Chemistry* by Raymond Chang, or at the same level. Laboratory work is an integral part of the course.

31—1 (8441)

Short Introduction to Chemistry

31—2 (8442)

(formerly *Chemistry 41*)

Open to Seniors who have not had a year of chemistry. Five class periods per week. This course surveys the basic

principles of chemistry, such as elements and compounds, periodic table, atomic structure, bonding, general reactions, acid-base chemistry, and simple chemical arithmetic. Laboratory work is an integral part of the course.

36—3 (8463)

Chemistry of the Environment

Four prepared class periods. Open to Seniors and Up-pers. Lower must have the permission of the instructor. This course is concerned with the effect of chemistry on the citizenry. Current issues — such as acid rain, chemical safety, waste disposal, and air and water pollution — are discussed. Chemical theories and principles are introduced as needed. Laboratory work and periodical readings are integral components. Not open to students who have had a year-long course in Chemistry.

44—2 (8522)

Chemistry of Nutrition

44—3 (8523)

Prerequisite: One year of biology, chemistry, or physics. Four prepared periods per week. This course will study carbohydrates, fats, proteins, vitamins, and minerals, with respect to their chemical structure role in the human body, and occurrence in food. As well, the connection between diet and disease will be examined. What is the nature of the relationship between fat and cancer, and fat and heart disease? What is the data underlying the fiber hypothesis, the possible protective role of vitamin A, and the claims for vitamin C? Other topics such as sports nutrition, energy balance, and food additives will also be addressed. A short research paper on some topic of interest will be required.

51—3 (8543)

Organic Chemistry

(Formerly *Chemistry 47*)

Prerequisite: Completion of either *Chemistry 25* or *30*. Three recitation periods, and one double laboratory period. Students interested in medical or biological fields or in additional chemistry must generally wait until the college sophomore year before studying organic chemistry, the chemistry of carbon compounds. This course is a prior introduction to this critically important and fascinating subject.

Organic chemistry is largely non-mathematical and descriptive in nature. Students will use a condensed "minicourse" text, learn many of the laboratory techniques unique to organic chemistry, make use of three-dimensional plastic molecular models, and gain a sound background in nomenclature, functional groups, bonding, simple mechanisms, typical reactions, and infra-red spectra.

52—12 (8554)

Advanced Placement Chemistry

(T2) (a two-term commitment)

Prerequisite: *Chemistry 25* or *Chemistry 30* completed with distinction. Four recitation periods and one double laboratory period. This is a rigorous course which treats the topics addressed in *College Chemistry* in greater

depth. It also prepares students who wish to take the Advanced Placement Examination in chemistry. This course may require more than the standard 4 to 5 hours per week of homework.

55—0 (8570) Advanced Placement Chemistry
Four recitation periods and one double laboratory period. Open to talented students who will be enrolled in at least *Math 35*, may have taken a physics course, and have not taken any previous chemistry. This is a rigorous course which treats the topics addressed in *College Chemistry* in greater depth, and prepares students for the Advanced Placement Examination in Chemistry. This course may require more than the standard 4 to 5 hours per week of homework.

60—2 (8282) Biology—Chemistry Laboratory
This is a course in LABORATORY RESEARCH. Open to Seniors and Uppers. Permission of the Department Chair is required. **Prerequisite:** One year of biology and one year of chemistry. Meets three double periods a week. Students in this course will learn laboratory techniques for working with bacteria, viruses, and perhaps tissue culture. Experiments will center on the molecular genetics of microorganisms, including the isolation, cutting and splicing of DNA by recombinant DNA biotechnologies. After learning a core of methodologies which are used in professional labs, students will apply them to short, focussed research projects in microbiology.

Finally, students may use this course as a springboard for a Westinghouse project, which would be accomplished at a professional lab during the following summer. Reading articles in scientific journals as appropriate would be part of a student's research. Students will also be asked to keep a lab journal and to write a final paper.

Physics

10—2 (8602) Introductory Physical Science

Five class periods. Open to Juniors with limited backgrounds in science. The course will deal with some of the basic concepts of physics by means of classroom work, problem solving, and laboratory experiments.

18—3 (8683) Introduction to Observational Astronomy

Four prepared class periods, with one period each week used for observation. This course is intended for Juniors and Lowers who want to become familiar with the universe in which we live. Topics include a study of the daily motion of the earth, moon, sun and planets by examining how those motions are responsible for night and day, seasons and the things we see in the sky. The course will

also examine the structure of the solar system and will explore the NASA space program through films and discussion. Much time will be spent making and analyzing naked eye and telescope observations of the night and day time sky.

20—0 (8700) Physics Honors for Juniors
Five prepared class periods. Co-requisite: Registration in at least *Math 19*. This is an honors course for talented Juniors with a strong interest and background in science and mathematics. Students entering this course should have completed one year of algebra with an honor grade. Laboratory work is an integral part of the course.

25—0 (8720) Introduction to Physics
Five class periods. Co-requisite: Registration in at least *Math 21*. Not open to Seniors except by permission of the department. An introductory course in the basic concepts of physics. The topics are covered in a less rigorous mathematical way than in *Physics 30*. Coverage includes mechanics, heat, waves, electricity, magnetism, and modern physics. Laboratory work is an integral part of the course.

30—0 (8730) College Physics
Five class periods. Co-requisite: registration in at least *Mathematics 32* or its equivalent. A non-calculus physics course, including a study of classical mechanics, wave motion, heat, kinetic molecular theory, relativity, geometrical and physical optics, and atomic and nuclear physics. Laboratory work is an integral part of the course. Text at the level of *College Physics*, by Sears, et al.

32—1 (8751) Classical Mechanics
This course covers the same material as the first trimester of *Physics 30-0*.

34—1 (8771) Cosmology
34—2 (8772)

Four prepared class periods. This course is open to Uppers and Seniors. Cosmology is the study of the structure and origin of the universe. Topics include the birth and death of stars, stellar temperatures, magnitudes and distances, the structure and origin of galaxies, a brief introduction to elementary particle physics and relativity, the Big Bang, the search for extraterrestrial life and the possible fate of the universe. The course will include telescope observations and movies of current cosmological interest as well as individual research on a recent cosmological topic of the student's choice.

35—1 (8781) Physical Geology
(Formerly *Chemistry 34*)
Four prepared class periods. A general introduction to physical geology, to include minerals, rocks, measurement of geologic time by radioactivity and fossils, volcanoes, seismology and earth structure, deformation of strata, faults, and plate tectonics. Some attention to disas-

ters of geological origin, e.g. earthquakes, tidal waves, and eruptions. Some of the periods will be used for laboratory work.

42—3 (8813) Electronics (Formerly Physics 33)
Four class periods per week. **Prerequisite:** Previous completion of or concurrent enrollment in *Physics 30* and enrollment in at least *Math 36*. A course in modern solid state electronics which considers passive circuit elements and their combinations, diodes, transistors, and integrated circuits. There will be considerable laboratory work.

44—2 (8822) Geology of the Solar System
Four class periods per week. **Prerequisite:** Prior completion of or concurrent enrollment in one chemistry or physics course. A study of the surfaces and interiors of the terrestrial and giant planets and their satellites, using results of manned and unmanned planetary probes as well as Earth-based observations. The emphasis is on elucidation of the surface features, internal composition, and evolution of these bodies for comparison with the Earth.

52—12 (8854) Advanced Placement Physics (T2)
(a two-term commitment)
Five class periods. **Prerequisite:** An honor grade in *Physics 30* or its equivalent and enrollment in at least *Math 54* or its equivalent. This is a rigorous course in mechanics (Fall term) and electro-statics and dynamics (Winter term). Calculus will be used as required. This course prepares candidates for the C-level Advanced Placement Examination in Physics and entrance to honor level programs in physics at the university level.

55—0 (8870) Advanced Placement Physics
Five prepared class periods. Open to talented students who will be enrolled in at least *Math 54*, may have taken a chemistry course and need not have taken any previous physics. If you are interested in this course, you may sign up for it with your academic advisor in the spring or you may request it on your course registration form. The department chairperson will then review your credentials and invite you to join the course or suggest you enroll in *Physics 30*. *Physics 55* prepares students for the C-level Advanced Placement Examination and is a rigorous course emphasizing mechanics and electro-statics and dynamics. This course may require more than the standard 4 to 5 hours of homework per week.

60—3 (8893) Relativity and Quantum Mechanics
Prerequisites: Enrollment in at least *Physics 30* and *Math 54*. Four prepared class periods. Relativity and Quantum Mechanics are two theories that completely revolutionized man's thinking about the universe. The course is a survey of the basic ideas underlying these theories. Special mathematical techniques needed for a better understanding of the material are developed in the course.

65—2 (8902) Physics Seminar
Four class periods. **Prerequisite:** Completion of *Math 54* and of the fall trimester of *Physics 52*. The focus of this course is Intermediate Mechanics. Topics will vary according to the interests of the instructor and the students.

Study Skills

(9502) **Basic Study Skills**
(9503)

Four class periods. This course is designed to help students build effective study skills through understanding more about the learning process. Class discussion focuses on the problems of motivation, concentration and retention. Exercises are designed to work on improvement in each of those areas and to develop proficiency in planning study time, in developing accurate yet flexible reading comprehension, in taking notes and marking books, and in preparing for exams. This course may be taken for at most one term.

(9521) **Language Skills I**
(9522)
(9523)

Four class periods. This course is designed for those students who need supplementary help in overcoming weaknesses in writing, spelling and vocabulary. Specific assignments are planned to meet the needs of each student. Permission of the instructor required.

(9533) **Language Skills II**

Four class periods. Seniors and Uppers who need help in writing essays and research papers may elect this course for the Spring Term only. Organizational skills, paragraph and sentence structure, and theme development will be reviewed, depending on students' individual needs. Students must have permission of the instructor.

(9541) **English as a Second Language**

Four class periods. This course is for those International students who need to improve their English proficiency. Specific assignments are designed to strengthen listening comprehension, conversational fluency, and writing skills in a second language. One English credit is earned for the course.

Theatre and Dance

All courses are electives, open to the various classes as noted. Courses in theatre are designed for students who wish formal exploration of the elements of stage work and a supplement to (or substitute

for) extracurricular work in productions. A variety of experiences is available: some courses result in performance; some courses study theory; some do both. Theatre students are encouraged, though not required, to supplement their class work by participating in any of the numerous productions mounted each year.

THEATRE COURSES

21—1 (6511) Introduction to Acting

21—2 (6512)

21—3 (6513)

Four class periods. Open to all classes. This course is designed for students with little or no acting experience. By doing exercises in movement and voice production, reading, improvisation, and scenes, a student who is curious about the theatre may determine whether he or she has ability or interest in acting, while learning something of the process of characterization, the major responsibility of the actor. The emphasis is on the variety of acting experiences rather than on a polished final product.

22—1 (6521) Public Speaking

22—2 (6522)

22—3 (6523)

Four class periods. Not open to Juniors. The course has a dual objective: to learn how to speak easily in front of others, and to learn how to speak English well. Students give prepared speeches on a variety of topics.

26—13 (6561) Technical Theatre (6563)

Two double periods. Open to all classes. Through practical experience in designing, building, and lighting for plays currently being produced, students learn the elements of stagecraft, including set construction, stage rigging, and the use of lighting instruments and gels. For the Fall Trimester emphasis will be on stagecraft; for the Spring, lighting.

32—2 (6622) Intermediate Acting 32—3 (6623)

Four class periods. **Prerequisite:** *Theatre 21*, or departmental permission. Building upon the principles of acting introduced in *Theatre 21*, this intermediate acting course consists of detailed scene work exploring the relationship of the actor to his audience and to his fellow actors and focusing on the creation of dramatic moments, both with and without scripts. The course considers various acting styles, in an effort to guide the actor toward a greater understanding of his responsibility on stage: to see to what degree he can remove himself from himself while creating truthful characterizations.

51—1 (6711) Acting and Directing Workshop

Two double periods. **Prerequisite:** *Theatre 21* or 32, or departmental permission. Uppers and Seniors only. The course serves two kinds of students: those who wish as actors to study plays and characters in greater depth and those who wish to study the principles and techniques of directing, the most complex of theatrical tasks. Class members work with manageable scenes from classical and contemporary periods, reading theories of acting and directing, studying various performance styles, and examining methods of scene interpretation. The total time requirements for this course (class time plus homework) may exceed the standard 9 hours per week.

52—123 (6721) Play Production (6722) (6723)

Four double periods. By audition. This course is oriented toward the performance of a significant work by an important playwright. Recent choices have been *The Sea Gull*, *Macbeth*, *As You Like It*, *The Hostage*, and *Hamlet*. The total time requirements for this course (class time plus homework) may exceed the standard 9 hours per week. See also *Playwriting* (English 516).

DANCE

25—123 (6801) Introduction to Dance (6802) (6803)

Four prepared class periods. Open to all classes. A formal course in movement and composition which introduces the serious student to the vocabulary and other elements of dance through active participation. The emphasis is not ultimately on public performance, but on the process and the discipline of modern dance. (Ms. Brecher)

Phillips Academy
Andover, Massachusetts 01810

ANDOVER

Catalog 1989-90



Phillips Academy admits students of any sex, race, color, national and ethnic origin to all the rights, privileges, programs and activities generally accorded or made available to students at the school. It does not discriminate on the basis of sex, race, color, national and ethnic origin in administration of its educational policies, admission policies, scholarship and loan programs, and athletic and other school-administered programs.

Andover

Catalog



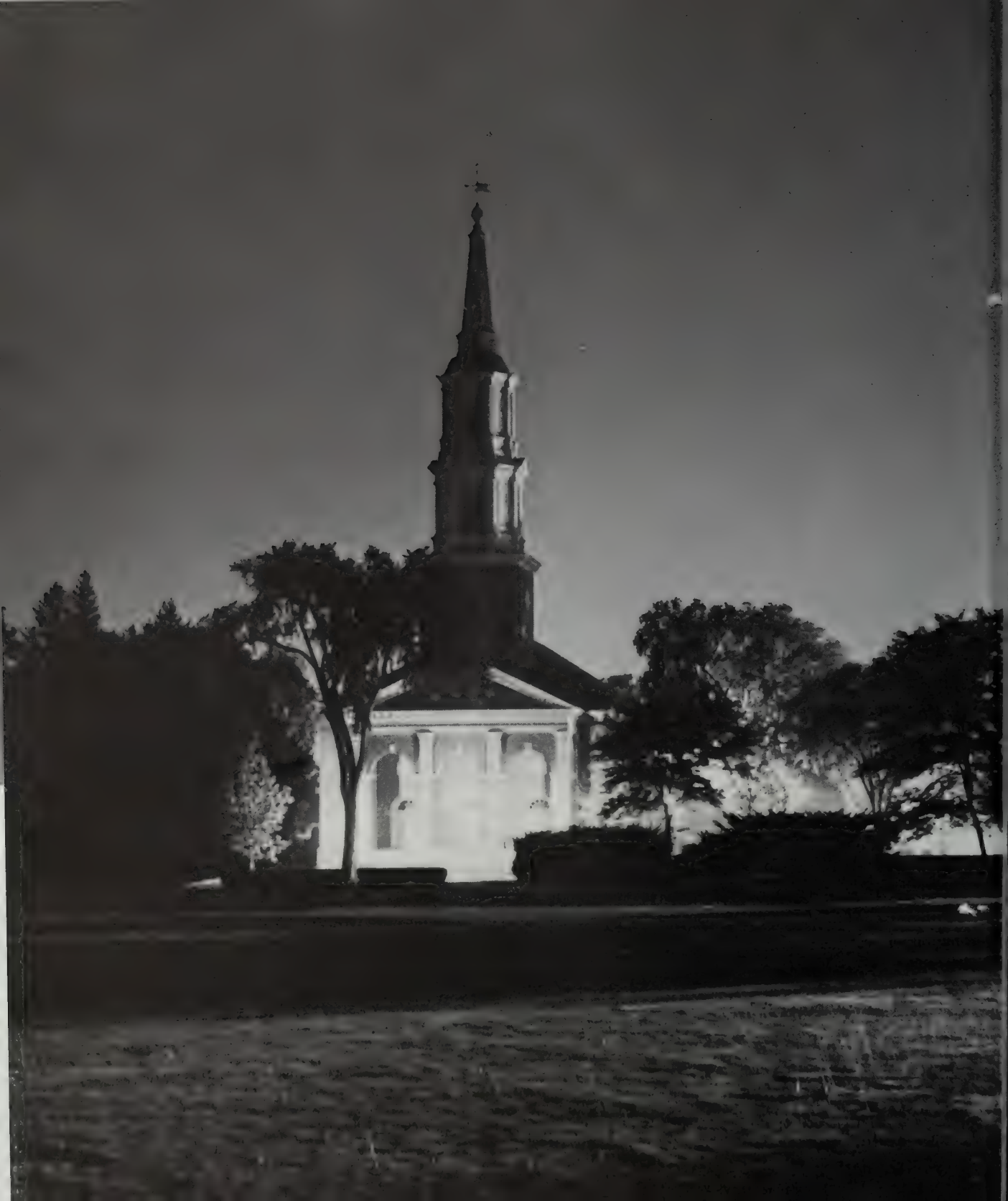
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Phillips Academy,
Andover, Massachusetts,
better known as Andover,
is an independent,
coeducational, integrated
and non-sectarian
institution offering a
variety of academic
programs for high school
students.

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Introduction to Andover



Phillips Academy in 1778

In 1789 the first scholarship monies are recorded, from John Phillips, "in consideration of further promoting the virtuous and pious education of Youth, (poor children of genius and of serious disposition especially) in Phillips Academy, founded in Andover, Massachusetts." Today, approximately 34% of the student body benefits from financial aid in the form of outright grants or loans; Andover has been able to implement an aid-blind admission policy for the last two years, ensuring a broad diversity within the student body.

When Lu Jianghong arrived on the Andover campus, she entered an unfamiliar world. She had traveled for two days to attend a school which she had never seen. A twelfth grade student, she had never before ventured beyond her home province of Manchuria in the People's Republic of China. She and her parents, professors at the Harbin Institute of Technology, were anxious to have her experience the West, and obtain a type of education unavailable at home. She applied to a special exchange program between the Institute and Andover, and was one of three top students accepted to travel to the United States to study at Phillips Academy for one year.

Jianghong was not alone in finding Andover very different from her home. She and her two classmates from Harbin became part of a student body of over 1200 young men and women, either returning to school or beginning a new chapter in their educations. They joined students from Guatemala, New York, and Lawrence, Massachusetts, who all found themselves a little scared, and very excited.

Jianghong was undoubtedly aware of the eclectic mix of her peers at her new school. What she may not have known was that in encouraging her to consider Andover, the Academy was fulfilling a mission which is well over two hundred years old. Since 1778, when Samuel Phillips, a gunpowder manufacturer for General Washington's army founded an academy to be "ever equally open to youth, of requisite qualifications, from every quarter," Andover's goal has been to gather young people from a broad range of experiences and provide them with the tools for a life of leadership and service.

The school Jianghong attends is very different from that of her Andover predecessors in the 18th century: the first class consisted of thirteen pupils from surrounding villages meeting in a rough shed. Today students come from over 28 countries and virtually all of the 50 states and territories to a campus of over 500 acres, where extraordinary modern facilities mix with school buildings more than one-hundred-fifty years old. Andover today enjoys two heritages: in 1973 Phillips Academy merged with neighboring Abbot Academy (est. 1829), one of the nation's oldest and most distinguished schools for young women. Now, part of the Abbot campus makes up one of six

clusters—residential “schools within a school” of approximately 200 students each, designed to provide a smaller, more intimate social community within the larger context of the whole school.

Jianghong came to Andover on a full scholarship. “Youth from every quarter” still means not only talented young people from a variety of geographic, racial and religious backgrounds, but also students from a wide range of economic situations. This year, as in the past, Andover was able to admit all new students without reference to their ability to pay the tuition. Through a strong program of grants and loans, awarded according to need, Andover may invite students exclusively on the basis of talent. Students who come to Andover bring to this campus not only academic ability, but also artistic, athletic, and creative strength. Over two thousand young people gather at Andover every year: in addition to the twelve hundred who attend the traditional school term for periods of up to four years, some eight hundred more spend the summer with us in the Andover Summer Session or various programs and institutes under its umbrella.

Andover is a residential school offering a twenty-four-hour learning experience. Young people in this community learn almost as much from peers as from teachers, particularly in a setting where there is no disjuncture between classroom and the outside, between school and home. Teachers at Andover are strong personalities, talented individuals of energy and well-considered values—instructors who work in the classroom, on the playing field, and in the dormitory. They approach students as whole people with real opinions, struggles, joys and concerns. The faculty in this community not only teach scholarship, they live it. An English teacher may be a professional photographer, a house counselor may use his evenings to finish his second off-Broadway play, and a field hockey coach may also be a highly regarded biology research scientist. Like the students, Andover teachers bring to this school a broad range of talent to offer the community.

Students come to Andover at a particularly significant time in their lives. What we expect from them is much like what Eliphalet Pearson expected from his students in 1778: a willingness to share their experience, to use their talents, and to be open to consideration of new ideas. Whether from Bangkok or Boston, young people must have the resources to establish their own success, refine their goals and visions of the future and build the courage to lead in a world where communications have made the world more accessible and international issues more acute. One of the reasons that Andover sought a formal exchange with the People’s Republic of China is our commitment to creating a community in which

people from different cultures can develop a common understanding; where young people at a critical time of decision-making can learn firsthand, through programs Andover offers, about what it is like to live in Senegal or work in Washington, D.C.

When Jianghong leaves Andover she will enter an American university. Wherever she goes, she will carry with her a set of experiences unique to having studied at Andover. For her, and for all young people who join our community, we want that experience to have been a challenging, constructive and joyful time in their lives.



Headmaster Donald W. McNemar



Andover Life

A Beginning



In 1782 Paul Revere was commissioned to make the Phillips Academy seal. Revere engraved the educational faith of Andover's founders — "The end depends upon the beginning" — around the symbols of the rising sun and the hive of industrious bees. The founders' religious and patriotic commitment to the common good is symbolized by the second motto, "*Non Sibi*" — "not for one's self."

If you come to Andover today, you will not have to go far to see a building designed by Charles Bulfinch or named for Nathan Hale. You might take computer graphics in a modern arts and communications center, discuss African history in an archaeology museum, or study the War of 1812 in a building constructed before it took place. Your roommate might be from Brazil or Tennessee. You might learn how to play squash, how to be a DJ in a radio station or how to run rapids in a kayak. In any case, you will be expected to make the most of who you are. Andover students benefit from a careful combination of independence and support. Instead of formal study halls, we have study hours between 8 pm and 10 pm. Students are required to be signed in either to their dormitories or an academic area on campus (library, language lab, art studio, music building). Only our junior (9th grade) dorms have an 11 pm lights out policy. There are many people here to help you: teachers in a residential setting are close by, either to chat or to review the math problem you did not understand in class. Professional study counselors stand ready to help you manage your time and give you advice on how to polish the term paper due next week. Your house counselor will be there to encourage you on your cycling, or teach you how he or she mastered irregular French verbs. The opportunities and support are here for students who demonstrate a strong sense of responsibility and independence.



The Abbot Bazaar, begun in May of 1920 at Abbot Academy to celebrate the original opening of the school, continues today as an annual outdoor carnival and rite of spring for Andover students. The Bazaar includes a dunking booth (traditionally occupied by the Headmaster), facepainting, tag sales, and picnicking.



The Place

The school is located on a hilltop in the town of Andover, a 35-minute bus ride from Boston and Cambridge. It is well situated for easy access not only to the historical, cultural and entertainment offerings of the Greater Boston area, but to the beaches and mountains for which northern New England is justly renowned.

Phillips Academy was the first boarding school to be incorporated in the United States (1780). During its more than two centuries the school has grown in size from a single rude building and a few acres of land to an extended campus of 160 buildings on over 500 acres.

A Purpose

This revised version of the Statement of Purpose, voted by the faculty in the spring of 1988, reaffirms the Academy's goals set forth in the Constitution of 1778.

Phillips Academy is a residential high school that seeks students of character and intelligence from diverse ethnic, racial, socioeconomic and geographic backgrounds.

The Academy's scholastic program is designed to foster excellence in all disciplines associated with the liberal arts tradition. Faculty members guide students to master skills, to acquire knowledge, and to think critically, creatively, and independently. The school strives to help young people achieve their potential not only in intellectual understanding, but also in aesthetic sensitivity, physical well-being, athletic prowess, and moral decisiveness so that they may lead productive, responsible lives.

Committed to discovering authentic sources of community, the Academy strives to understand and respect the differences that arise in a multi-cultural setting. Academic and residential programs encourage sensitivity to issues of gender, race, and social class. The school's residential structure fosters close association between faculty and students for personal, social, and intellectual development.

Andover's 1778 Constitution charges the Academy to prepare "youth from every quarter" to understand that "goodness without knowledge is weak and feeble; yet knowledge without goodness is dangerous." This obligation challenges students in mind, body, and spirit to see beyond themselves and to go beyond the familiar; to remain committed to developing what is finest in themselves and others, for others and themselves.



The People

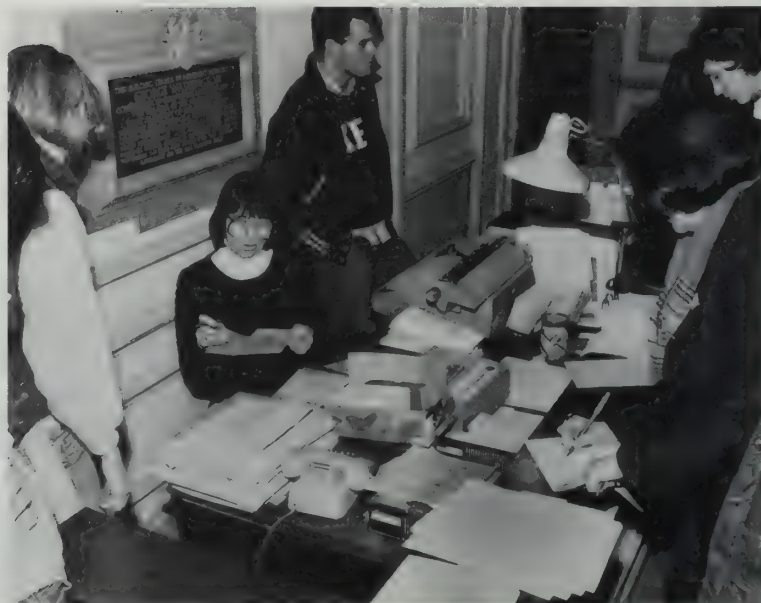
Students

There are approximately twelve hundred young men (54%) and women (46%) in Andover's regular session, of whom about one-fifth are day students. More than eight hundred others attend the various programs and institutes of the Academy's Summer Session.

Andover students are divided into four classes: Seniors, Upper Middlers, Lower Middlers and Juniors—our traditional terms for 12th, 11th, 10th and 9th graders. Some are here for four years, most for a shorter time, but they all have two things in common: intelligence and the willingness to use it.

Faculty

The faculty number approximately two hundred; two-thirds hold advanced degrees at the master's or doctorate level. Andover teachers teach not only in the classroom, but on the field, in the dormitory, and through numerous extracurricular clubs and activities as well. They demand as much of themselves as of their students: among a myriad of responsibilities to the school, the faculty find time to be authors, research scientists, photographers, prize-winning poets, theological scholars, and professional musicians.



The Work

If you come to Andover, you have the ability to accomplish all that is expected of you academically, but come prepared to work hard. Students at Andover must complete a required core of studies which the faculty feels is essential to a liberal education. This includes three years of language; a yearlong science course, plus three additional terms of science; three years of mathematics; a year of United States history with a required additional term of elective history; a term each of music, visual studies, religion/philosophy and physical education; three years of English. Requirements for a diploma vary according to the level at which a student enters the curriculum, and are described fully in the *Andover Course of Study*.

Beyond this framework, students choose their own courses with the guidance of an academic advisor. The school encourages all students to construct a curriculum which reflects breadth, depth and balance, and to take advantage of the hundreds of elective courses available.

A year, a week, a day

Andover operates on a trimester system, offering about 285 separate courses that vary in length from one trimester to the full year. The year begins in late September and ends in mid-June, with breaks at Thanksgiving, Christmas and in the early spring.

Classes are held on Monday, Tuesday, Thursday, and Friday, the full class days, and on Wednesday morning and every other Saturday morning.

Wednesdays and Saturdays are half study days with no afternoon academic appointments. On alternate Saturdays there usually are no morning classes and Sunday is totally free. This flexible weekly schedule provides time for independent study, for special projects, for informal as well as regularly scheduled sports, shopping in Andover, or occasional trips to Boston. Social events during the week are limited by the demands of the academic program, but the weekend program on campus includes dances, concerts, movies, plays and informal activities.

Participation in athletics is required of all students, and athletics and activities are scheduled four afternoons a week for two hours each. On Wednesday and Saturday afternoons, varsity and junior varsity teams participate in interscholastic competition.

Meals are served in Commons, our fifty-year-old central dining hall, composed of four handsome, traditional dining halls and four completely modern serving areas. The cost of meals is included in the fees of both boarding and day students.

The Daily Schedule

7:15 am	Commons opens for breakfast
8 am	Classes begin. Seven, 45 minute periods per day
9:45–10:15 am	Conference Period
11:30 am–1:30 pm	Lunch available at Commons
2:45 pm	End of last class
3:15–5:15 pm	Sports
5–6:30 pm	Supper available at Commons
6:20–7:50 pm	Music rehearsals
8 pm	Underclass students should be in their dormitories or doing academic work in the library, language lab, art studio, or music building
10 pm	Dorm sign-in for all students on weeknights (during 5-day weeks, Friday evening sign-in for underclassmen is 10 pm, 11 pm for seniors, and Saturday evening sign-in for all students is 11:30 pm)
11 pm	Lights out for juniors

Students normally have four or five class meetings per day.

Most students are eligible to take a day excuse each week, and, after the first two weeks of the year, overnight excuses beginning after their last scheduled weekly appointment.

Course work is intensive and involves about twenty to twenty-five hours of outside preparation each week. Required athletics or afternoon activities total approximately six hours each week. In addition, all students are required to participate in the school's work program, performing assigned tasks, supervision or leadership responsibilities two hours each week. Despite the amount of time that must be spent on academic pursuits, most students become very involved in extracurricular activities and social events. The school encourages independence and personal responsibility: there are study hours but no study halls, and decisions about the use of one's time are largely left to the judgment of the individual.



Residential Life



On any given weekend, social events on campus could include at least one dance, a movie, coffeehouse or concert, and a theatre production in the Drama Lab. The Del Fuegos (above), called by *Rolling Stone* magazine one of its "New Artists of the Year" in 1985, performed at Andover recently. They are Woody Geissmann, Tom Lloyd '79, Dan Zanes '79, and Warren Zanes '83.

Dorms and Clusters

Boarding students live in dormitories with faculty house counselors and their families. Although these buildings vary in size and house from four to twenty-four students, all are small enough to encourage close relationships among students and between students and house counselor. One-third of the students live in single rooms; two-thirds in large double rooms. Juniors are housed together in special dorms. Other larger dorms are likely to have students from at least three classes.

For many students, dormitory life is one of the most valuable aspects of their time at Andover. Whether it's planning a pancake breakfast or studying for a history mid-term, sharing it with people from very different backgrounds or from foreign lands is a rewarding learning experience.

Dormitories are grouped into six geographical units called "clusters," each including girls' and boys' dorms, about two hundred students from all classes, and twenty to thirty faculty families. Clusters create the personal atmosphere of a small community in which everyone knows everyone else and people do most or many things together. The cluster system is the heart of Andover's residential life, bringing the advantages of a small school to an institution that already has the advantages of size.



The clusters have considerable autonomy; teachers and students together manage their own affairs under the leadership and supervision of a cluster dean, who works closely with the dean of residence. Each cluster has its own academic counseling, student officers, discipline system, intramural athletics and informal social activities.

A faculty member is responsible for administering the student work program, which is designed not only to develop a sense of community responsibility for the daily operation of the school, but also to help the school reduce its operating costs. Working two periods a week, all students share the jobs of cleaning the dormitories, returning books to library stacks, serving as office helpers and laboratory assistants, and performing other essential tasks. In addition, all residents of a given dormitory are responsible for keeping its entries free of litter, snow and ice.

The clusters take turns each week working in the dining hall, seniors serving as overseers. Seniors have many other supervisory roles, including cluster and school offices, editorial boards of student publications, club leadership, and other assignments serving the Phillips Academy community.

Counseling and Discipline

Those who are not accustomed to a residential school may at first be surprised by the degree of independence an Andover student is given. Along with that freedom come rules and procedures necessary to protect the rights of individuals and to enable the school to achieve its ends. Existing rules have a dual purpose: to preserve the necessary order in the community so that effective learning can take place, and to teach students that individual freedom can be achieved only through due consideration for others. Incoming students and their parents are provided with a copy of the *Academy Blue Book*, summarizing rules and regulations; all students are held responsible for its contents.

The resident house counselor is the faculty member most directly responsible for the students in a dormitory, working with them on both a personal and academic level. Parents can expect to hear from the counselor at regular intervals and are encouraged to turn to this faculty member for information about a student's progress.

Each cluster dean supplements the work of the house counselor and is available to students and parents for information and advice. Other support staff include academic advisors, who help students in the cluster plan their academic pro-

grams, and the College Counseling Office, which assists all seniors with their future educational plans.

Graham House Counseling Center serves the community in several ways. The staff offers psychological counseling, study counseling, study skills courses, student tutorial services, the Psychology Department curriculum, consultation to faculty and staff, and specialized workshops in response to residential needs.

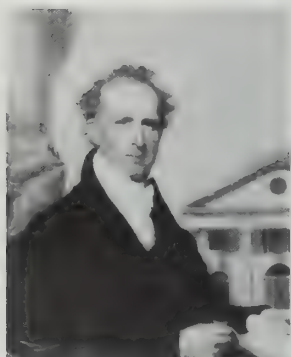
Discipline is handled at the cluster level and involves the cluster dean, house counselor, other faculty and student representatives. Offenses involving a student's integrity, social offenses that threaten the well-being of other individuals or the school community, and continued infractions that indicate an unwillingness to come to terms with the demands of the school—all render a student liable to dismissal. Cluster recommendations for suspension or dismissal are made to the headmaster, who makes the final decision. Examples are dishonesty, the possession or use of alcoholic beverages or illegal drugs, and unauthorized absence from school bounds. Students may not possess, rent or drive any motor vehicle within school bounds; bicycles are permitted.

Minority Counseling

Minority Counseling provides support services for black and Latino students at Phillips Academy. The office is located in Phillips Hall on Main Street, which serves as an Afro-Latino Cultural Center and Heritage Library. The center is open to the entire Phillips Academy community. The center is also the meeting location for the Afro-Latino-American Society board meetings. It is available to other groups for meetings and small study groups. Counseling services, of a non-therapeutic nature, are provided on an ongoing basis for any student who wishes these services.

Minority Counseling sponsors programs and workshops for the school. The programs assist students in adjusting to Phillips Academy's rigorous schedule, celebrate the diversity that is present on our campus, and strive to eliminate racism.

In a community such as Andover, all must commit themselves to the goals of the community and to loyalty to each



Young Josiah Quincy, in 1778, didn't look forward to the prospect of eight long hours in the recitation room: "The truth was, I was an incorrigible lover of sports of every kind. My heart was in ball and marbles." He went on to become congressman, mayor of Boston and president of Harvard.



other. Since education at Phillips Academy is both intellectual and humane, students and faculty derive mutual support from sharing of themselves and their ideals.

Trust and responsibility have many interpretations; these words have become hackneyed from overuse and misunderstanding. But the ideas they embody—sensitivity to others, willingness to explore and respect differing points of view, charity and humility in expressing judgment, readiness to cherish friendship, to depend and to be depended upon—are nonetheless fundamental. Such values can scarcely be legislated and can only be imperfectly defined. Yet the health and happiness of everyone in the community depend on consideration and awareness, restraint and candor, discretion and shared joy. Collaboration toward these imprecise but worthwhile ends is an expectation which all at the Academy hold.

Only those who feel that they can live happily with the rules and guidelines of Phillips Academy should apply for admission.



Harriet Beecher Stowe, author of *Uncle Tom's Cabin*, and her husband, a Seminary professor, lived in Stowe House. She is buried in the school cemetery. Mrs. Stowe, who shocked the strict Congregationalist community by giving parties and entertainments for students, was suspected of going to the theater and even of having "Episcopalian leanings."

Claude M. Fuess, *An Old New England School*

The Campus Ministry

Reflective of a diverse student body, the religious ministry at Phillips Academy is also diverse. Priest, minister, and rabbi serve the ongoing liturgical and celebrative needs of the Roman Catholic, Protestant, and Jewish students on campus; the chaplains also teach, counsel, and help organize a variety of community service and social action projects for the entire campus. To meet the needs of students from other spiritual traditions, opportunities are provided for reflection, meditation, and fellowship in a variety of settings.

Community Service Program

The Community Service Program provides opportunities for students to volunteer time in service to the community in Andover and in the nearby city of Lawrence. Volunteers may participate during free time or in place of a sport. Among the many volunteer opportunities are, tutoring children from culturally and ethnically diverse backgrounds to strengthen their learning skills; assisting teachers in their work with physically handicapped and developmentally retarded children; working with children from 3 months to 5-years-old in the Andover Community Child Care Center on campus; the Big Brother and Big Sister program in Lawrence; The Academy Manor Nursing Home in Andover.

The program's primary goal is that participants learn a deeper appreciation of themselves and their potential, and to achieve personal growth in the service of others fulfilling the mandate of the academy's motto, *Non Sibi*, not for self.

Activities

Extracurricular activities are an important aspect of a student's education, and Andover offers a rich fare, thanks to the diversity of interests in the student body. From the Chess Club to the Computer Club, it seems that all Andover students do something special in their free time. The Tour Guide Association handles the responsibility of conducting campus tours for the Admission Office, and older students who are members of the Tutorial Program offer help to fellow students in academic difficulty. The student radio station, WPAA (91.7 FM), is on the air from 6:30 a.m. to 11:30 p.m. daily, serving the local listening area as well as the student body. *The Phillipian*, the Academy's prize-winning, student-run weekly newspaper, is wholly

uncensored; students lay out the paper and do their own typesetting, as well as write the articles and headlines. The *Pot Pourri*, the school yearbook, and the school literary magazine, *The Mirror* (Robert Frost was an early contributor), provide more opportunities for those with a literary bent.

Cultural organizations include the Afro-Latino-American Society, the Asian Cultural Society and others; course-related groups range from the Astronomy Club to the German Club. The Chapel Fellowship, the Newman Club and the Jewish Student Union support the ecumenical ministry in providing active religious communities for Andover students.

At any time during the week, actors and directors will be working on a main stage play or on a student production in the Drama Lab; the Andover Political Economy Club may be listening to a State Department official discuss the Middle East; the Natural History Club may be bird watching on an ocean beach or—if the season is right—the Ski Club may be on its way to the White Mountains of New Hampshire.

Many students make extensive use of school facilities in their free time, whether or not they are affiliated with a club or organization. The Arts Center is a major focus of school life—darkrooms are used almost around the clock, and students and faculty interested in painting, metal sculpture, ceramics or design make use of the center's studios and workshops in their free time. The Music Department also provides facilities for students interested in pursuing music beyond the classroom.

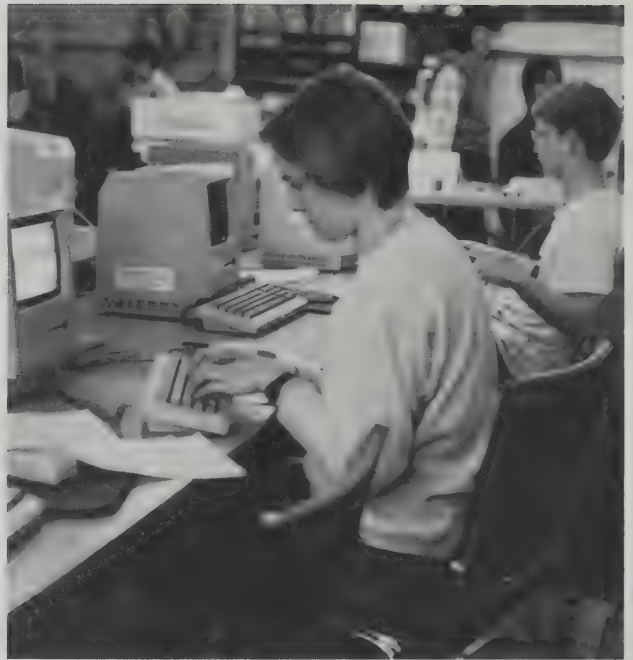
There is no limit to the variety of extracurricular activities at Andover. Students who do not find an existing club or organization that meets their needs are encouraged to start one.

Organizations (Clubs)

Afro-Latino-American Society
All That Jazz (vocal jazz group)
Amateur Radio Club/W1SW
Andover Forum (current events publication)
Asian Society
Astronomy Club
Blue Key Society
Bridge Club
Cercle Francais
Chapel Fellowship
Chess Club
Chorus
Community Service
Computer Club
Dance Club
Equestrian Club

8 'n 1 Club (singing group)
Fidelio Society (madrigal singing society)
German Club
The Heartland Coalition
Jewish Student Union
Just Ordinary Komedians Everywhere
The Leaky Pen (satire club, with publication)
The Mirror (literary magazine)
Model United Nations Club
Mohgul Society (Indian Society)
Natural History Club
Newman Club
Nuclear Awareness/Education Club

The Phillipian (student newspaper)
Philomathean Society (debating society)
The Photography Club
Political Economy Club
Pot Pourri (yearbook)
Press Club
Scuba Club
Ski Club
Strategic Gamers Guild
Tertulia (Spanish club)
WPAA (student radio station)



Educational Resources

The Oliver Wendell Holmes Library

At the center of Andover's intellectual life is the newly restored Oliver Wendell Holmes Library, named after the famous doctor and poet who was a member of the class of 1825. The building, which consists of the original 1930 structure of 30,000 square feet and an addition of 30,000 square feet completed in 1988, contains the academy's main library collection of 100,000 volumes. The stacks are open to students. In addition to academic work, students and teachers use the library collections to explore new fields of interest and to read casually.

The library subscribes to over 260 American and foreign periodicals and daily papers from cities throughout the country. A microfilm file of *The New York Times* is available. Particular library treasures are the Jansson Atlas, printed in Amsterdam in 1657, papers and books of Oliver Wendell Holmes, and one of the world's leading collections of Vergiliana.

The facility also houses the academy's Computer Center, a day student locker area, faculty research carrels, faculty reading room, and a number of classrooms and seminar rooms. The building, which is open to students 80 hours per week, provides both contemporary and traditional settings and a variety of study and lounge seating.

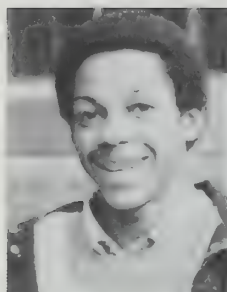
Computer Center

A computer center, located in the lower level of the Oliver Wendell Holmes Library, is available for student use. It houses two computer classrooms and a third lab filled with an array of Macintosh, Apple IIe and Zenith (IBM compatible) computers, Imagewriter, Laserwriter, and various other letter quality printers. A wide range of software is available, and instruction in computer usage is provided. The center is open during the regular operating hours of the library.

The Addison Gallery

The Addison Gallery of American Art operates both as a museum in the traditional sense and as an art center for the school and the community. In addition to organizing exhibits of American art from the collection, the museum staff originates exhibits of contemporary painting, sculpture, photography, video, film and crafts. The museum has pioneered the uses of new media in its programs beginning with video in 1965 and most recently with the utilization of interactive video discs both as exhibition components and for an electronic catalog of The Addison's holdings. Seminars bring artists in close contact with students to discuss contemporary art issues. In cooperation with Phillips Academy's Music Department, concerts by faculty and students are produced in the museum.

The holdings of the museum are recognized as a distinguished specialized collection: Allston, Copley, Morse, Stuart, West and others represent the Colonial period. Of special importance among the many paintings of the nineteenth century are examples by Cole, Doughty, Eakins, Homer, Inness, LeFarge, Ryder, Twachtman and Whistler. The early part of the present century is shown in the work of Bellows, Davies, Demuth, Hassam, Hopper, Luks, Marin, Prendergast and Sloan. Contemporary artists are represented by works of Calder, Lippold, Moholy-Nagy, Hofmann, O'Keeffe, Pollack, Shahn, Wyeth and others.



Sidney Smith, class of 1985, as the President of the Afro-Latino-American Society on campus helped to found NEALSA, the New England Afro-Latino Student Alliance, an organization to promote communication and interaction among students of color at independent schools. NEALSA continues today with many social events among member schools and an annual conference.



The Robert S. Peabody Archaeology Museum

The Robert S. Peabody Foundation for Archaeology has conducted major archaeology research in this hemisphere for the last seventy-five years and has published many reports of its scientific investigations. The Foundation maintains a museum which cares for many famous collections based on some of the most important archaeological expeditions undertaken in the Americas. The laboratories of the museum are used in teaching and illustrating the Foundation's research. Mature students may undertake special study projects which involve the use of the Foundation's collections and library resources.

The Cochran Sanctuary

The Moncrieff Cochran Sanctuary is a sixty-five-acre tract of rare beauty located so close to the center of school activity that it is in fact an extension of the campus. Landscaped areas planted with dogwood, azalea, rhododendron and laurel provide a succession of bloom that draws many visitors from late April to mid-June. A brook and two ponds attract nesting ducks and geese, and extensive natural wild areas, varied in terrain and plant life, provide nesting places for many species of land birds. Cross-country runners and skiers make extensive use of the Sanctuary, as does the Academy's Search and Rescue program.





The Academic Departments

The Curriculum

The curriculum of Phillips Academy contains both a required core of studies believed to be fundamental to a liberal education and elective courses designed to fit the special needs and interests of the individual student. Instruction is given in all subjects required for entrance to higher institutions, whether liberal arts or technical. All departments offer courses beyond the level of preparation for college.

Classroom groups are small enough to permit individual attention; the average class size is fourteen. Students are placed in sections fitted to their attainment and, through accelerated sequences and advanced courses, are encouraged to progress at a rate commensurate with their ability and ambition. Many students fulfill requirements ahead of the normal year, increasing their choice of college-level courses and other elective opportunities. Andover's trimester system provides flexibility and variety in the curriculum and allows various combinations of independent work and off-campus projects.

Every student is assigned an academic advisor who, over the span of the student's career at Andover, joins the student in planning an educationally sound program of studies; a program which is both broad and rigorous, and which takes into account the student's strengths and interests, as well as diploma requirements and college aspirations.

The curriculum and diploma requirements are described in detail in the *Course of Study*, which will be sent upon request to each preliminary applicant and to others who would like to receive it.

THE ARTS



During his second and third years at Andover, Jack Lemmon's grades were suffering due to his overpreoccupation with theatrics and composing. Though things looked very bleak in his senior year, he applied himself diligently and made what he thought was an astounding reversal. Against all odds he was able to graduate. When Headmaster Claude Fuess handed the proud young Lemmon his diploma, he said, "A remarkable change. I'm truly impressed, Bill."

Visual Arts

At the heart of the art program is a concern that all students learn to see freshly and accurately, that they learn how to organize their efforts to make something happen, that they develop a critical eye for the coherence of their environment, all these with an independent mind.

The diploma requirement in art is as follows: Juniors and new Lower Middlers must take a trimester course in studio art; an entering Upper Middler must take a trimester course in studio art or music. Andover attempts to balance structured, problem-solving courses like the basic Visual Studies, with more adventurous advanced courses, organized around longer-term projects. For a student who desires several terms in art or design, the courses are here, whether the student's objective is a professional school, Advanced Placement in a liberal arts college, or simply a strong basis in a traditional area of general education.

The superb facilities of the Arts and Communications Center—fully equipped wood and metal shops, two complete photo labs, print-making equipment, painting and drawing studios, a kinetics studio, computer graphics labs, video studio—are supplemented by the several kilns available to ceramicists. The department welcomes extracurricular use as well as work related to courses, and faculty members are on hand every evening to encourage the idea that whether it's painting or computer graphics, the Arts Center is the place to go.

Theatre and Dance

Courses in theatre are designed for students who seek formal exploration of the elements of stage work and a supplement to (or substitute for) extracurricular work on plays. A variety of experience is available; some courses are performance oriented; some are theory oriented; some are both. All combine classroom and workshop sessions; students work out practical theatrical problems together under the guidance of an instructor. Drama, as well as dance, both modern and ballet, may be elected as an alternative to athletics, once a year.



George Washington Hall, capable of handling audiences of one thousand, includes a flexible, professionally equipped proscenium stage. It has a full fly system, accommodation for numerous lighting instruments and an elevator/pit. Recent main stage productions have included *Richard III*, *Taming of the Shrew*, *The Dining Room*, *Hamlet*.

The Drama Lab, also in George Washington Hall, is a "black box"—an intricate arena/workshop with excellent lighting facilities, suitable for audiences of not more than seventy-five. Although main stage plays are usually directed by a member of the faculty, the Drama Lab allows students to direct plays themselves and to experiment with dramatic styles. A sample of productions from recent years includes plays by Albee, Ionesco, and Pinter but original student work is also performed here.

Theatre students are encouraged—but not required—to supplement their classwork by participating in any of the numerous productions mounted each year.

Music

The Music Department faculty consists of five full-time and several part-time instructors. Other highly qualified instrumentalists are available to teach voice, piano, organ, classical guitar, brass, percussion, strings, and woodwinds.

Andover offers courses for the beginner as well as for intermediate and advanced students both at the applied level (study of musical instruments or playing in a musical organization) and in the history, appreciation, and theory of music.

The Nature of Music, or Music 20, is the diploma requirement in music, and a prerequisite for most courses in the history, appreciation, and theory sections. A more advanced three-part course, Theory of Music, runs in sequence throughout the year.

Graves Hall, the department's newly renovated home, has large rehearsal halls for concerts as well as many individual practice and ensemble rooms, music classrooms, teaching studios and an electronic music studio. Graves Hall also houses

the Timken Recital Hall where faculty, guest, and student recitals take place. The Department also has a large, up-to-date record library and listening room.

The Chorus has a fully equipped rehearsal room and a library of music literature in the Cochran Chapel, a short distance away. The Chapel also houses two new organs for the use of beginning and advanced organ students. One is located in Kemper Chapel; the other, in the main chapel, is a 30-stop, double manual, tracker action instrument.



VISUAL ARTS

Introductory Studio Courses

Visual Studies

Visual Studies for Juniors

Introductory Design

Introductory Ceramics

Introductory Photography

Intermediate Studio Courses

Visual Studies (Art 10) is a pre-requisite for all intermediate courses.

Drawing

Animation

Drawing and Two-Dimensional Design

Two-Dimensional Design

Three-Dimensional Design

Intermediate Photography

Advanced Studio Courses

Visual Studies (Art 10) is a pre-requisite for all advanced courses.

Graphics and Photography

Studio Photography

Painting

Filmmaking

Advanced Ceramics

Printmaking

Advanced Photography

Sculpture

Photo Illustration

Large Format Photography

Photo Journalism

Kinetics

Architecture

Contemporary Communications

Calligraphy: The Art of Lettering by Hand

Advanced Placement in Studio Art

History of Art: Painting and Sculpture

History of Art: Architecture

MUSIC

Applied

Beginning Instruments

Recorder Ensemble

Brass Ensemble

Woodwind Ensemble

String Ensemble

Fidelio Society

Band

Chorus

Chamber Orchestra

Private Instrumental and Vocal Lessons

The Nature of Music

Developing Musical Skills

Opera Seminar

History and Appreciation

Independent Study in the History and Literature of Music

Jazz

Popular Music in America

Theory

Orchestration and Conducting

Theory of Music I

Theory of Music II

Theory of Music III

Electronic Music

Advanced Techniques in Electronic Music

THEATRE AND DANCE

Theatre

Introduction to Acting

Public Speaking

Acting and Directing Workshop

Stagecraft

Play Production

Shakespearean Workshop

Playwriting

Dance

Introduction to Dance

CLASSICAL STUDIES

The chief aim of the Department of Classics is to help students rediscover the sense of order and ideals which has been the glory of the ancient world of Greece and Rome. Through its elective courses in Classical Studies, taught in English, students can survey the history and the thought of Classical Civilization and its influence and importance to their experiences in the world we face today.

CLASSICAL STUDIES

Greek Civilization
Roman Civilization
Etymology
Ancient History
Classical Mythology



ENGLISH

Convinced that level of achievement is more important than the number of years a subject is studied, the English Department has established modest but firm diploma requirements. Students must prove themselves competent in writing and reading through the English Competence course and, by taking the Literature Sequence, acquire a sense of the depth and breadth of their literary heritage. For students who enter in the 9th grade, English 10: The Journey, which is a preparation for the Literature Sequence, is also required.

Once the student has successfully completed the diploma requirements, opportunities multiply. Students may enroll in any of the Literature Sequence courses that they have not yet taken, or they may study any of the advanced or specialized courses offered by the department. Seniors may also qualify for an independent project supervised by the teacher of their choice.



ENGLISH

Introductory Courses

English 300 (for Seniors and Postgraduates)

Required Sequence Courses

English Competence (three terms)

Lit B, The Satiric View, The Tragic View or The

Mythic View (two terms)

Lit C, Shakespeare (one term)

Elective Courses

(Only courses with sufficient enrollment will be given.)

Irish Studies

British Writers

American Writers

Introduction to Writing

Afro-American Literature

James Joyce

Man and God

20th Century Drama

Shakespeare: The Man, The Times, The Theatre,
The Plays

Satire and Comedy

Novel and Drama Seminar

Creative Writing

The Short Novel

Milton and Spenser

Chaucer and His Age

Wit and Poetry in the Seventeenth Century

Images of Women



Graceful Bulfinch Hall (1819) has been in Academy use for more than 150 years as a recitation hall, gymnasium, and dining hall and now houses Andover's English classes. Dr. Oliver Wendell Holmes, class of 1825, immortalized "the classic hall" in his poem, "The School-boy," written over 100 years ago for the Academy's Centennial Celebration. In 1984, Bulfinch received a full interior restoration, to reflect its original early 19th century design.

HISTORY AND THE SOCIAL SCIENCES

The study of history and the social sciences provides certain kinds of knowledge, skills, and understanding fundamental to a liberal education. A study of the American past continues to be a prerequisite for a participating citizen in a constitutional republic. Vital though such a study is, an examination of other cultures, both European and non-Western, is crucial for broadening a student's understanding of an interdependent world. The department of history and the social sciences, therefore, integrates the study of non-Western cultures into courses at every grade level.

For Juniors, the department offers a three-term survey of Western civilization from the ancient to the medieval world. Although the primary goal is familiarity with Western institutions and ideas, students examine contemporaneous developments in the non-Western world. Another sequence, primarily for Lowers, allows students to continue their survey of the modern world—both Western and non-Western—from the 14th to the 20th century. Through these elective courses, students learn skills and concepts essential to the study of history, and thus prepare for more advanced courses in the field.

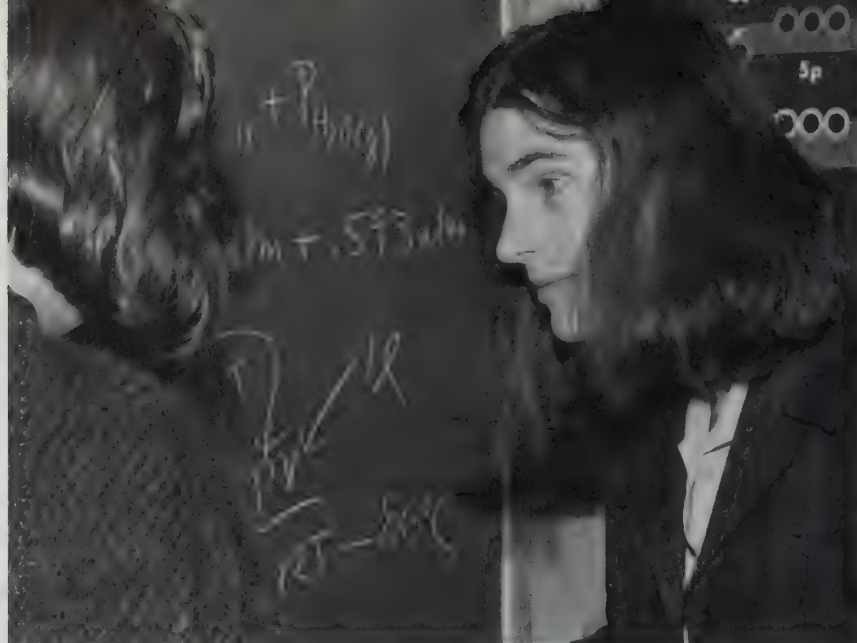
In the Upper year, most students study United States history. Three terms of U.S. history, followed by a term of non-Western history or international social science, satisfies the department's four-term diploma requirement. Seniors may choose from a variety of area histories: Russia, Asia, Africa, Middle East, Latin America; or from social-science courses: Introduction to Economics, Comparative Government, International Relations. A yearlong Advanced Placement survey of Modern European history is also available to Seniors, Uppers, and exceptional Lowers. Seniors who wish to surpass the requirement may take advanced seminars in the Renaissance, Issues in Economics, American Race Relations, Men and Women and American Culture, Social History of Families in America, Courts and Constitutional Development, and Nuclear Weapons.

In the required United States history course

and in several of the Senior electives, students write extensive research papers, using government documents, newspapers, letters, diaries, interviews—the raw materials of history. For qualified Uppers and Seniors, there are two programs of special interest: a student may spend the spring term in Washington, D.C., working as an intern in a congressional office, or may join the Urban Studies Institute, which involves both course work and field work centering on the city of Lawrence.

HISTORY AND THE SOCIAL SCIENCES

Ancient History
Classical History
Medieval History
Early Modern World
The World in the Eighteenth Century
The World in the Nineteenth Century
United States History
United States History for International Students
Modern European History
Introduction to Economics
Urban Studies Institute
Comparative Government
International Relations
The Russian Experience
Asia: China, Japan and India
Africa and the World
The Middle East
Latin American Studies
History and Mathematics
Victorian England: England in an Age
of Expansion
Issues in Economics
American Race Relations
Men, Women and American Culture
Nuclear Weapons: Proliferation and Responses
The Renaissance
A Social History of Families in America
The Courts and Constitutional Development,
1935–1985



MATHEMATICS

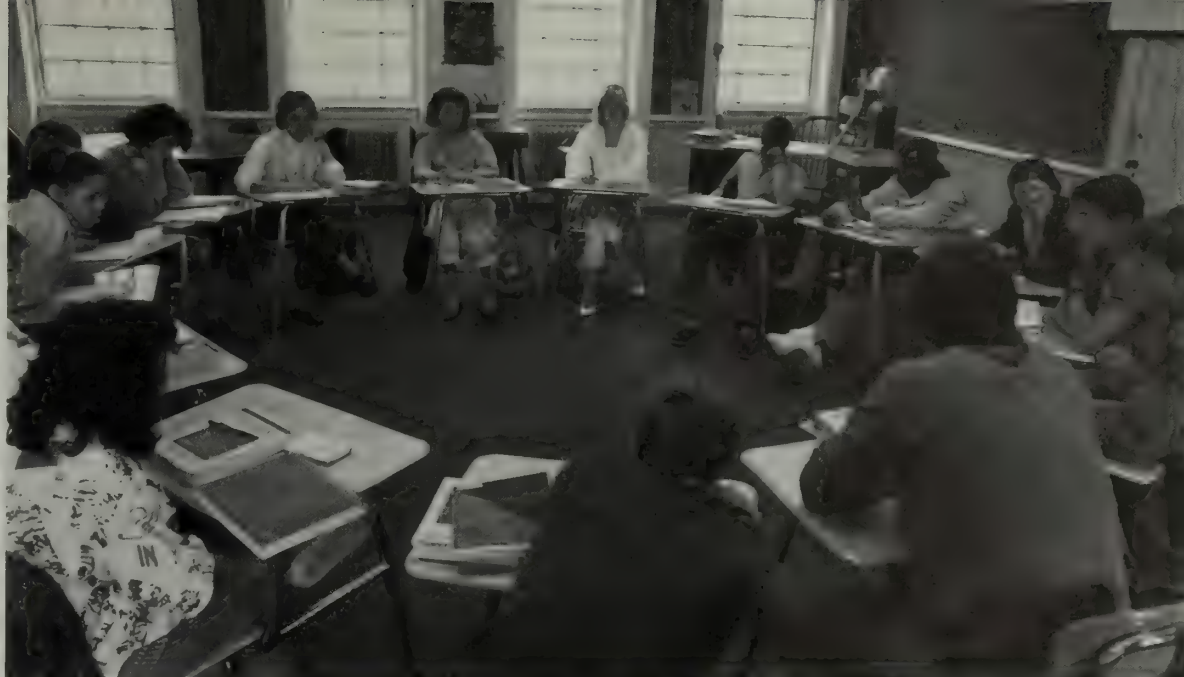
Mathematics at Andover is addressed to several overlapping audiences within the student body: the future citizen of late twentieth century society, immersed in a culture which has been shaped to a large extent by mathematical perceptions of reality; the future user of mathematics, whose vocation may depend upon special knowledge of a mathematical sort; and the future mathematical scholar, who may turn his or her energies and curiosity to the organization of mathematical knowledge.

The mathematics curriculum is built around a core sequence of eight trimester courses, three of elementary algebra, two of geometry, one of intermediate algebra, and two of precalculus topics, completion of which will satisfy the diploma requirements. An additional trimester is required before entering calculus. Students whose previous course was elementary algebra will take *Geometry* unless our placement test indicates a need for further work in algebra first. Those who enter with one year of algebra and one year of geometry will satisfy our diploma requirements by taking intermediate algebra and the first two precalculus trimesters unless the

placement test shows a need for *Algebra Consolidation* first. The latter course prepares the students to take the precalculus courses beginning in the spring term of their first year. There are a variety of special courses designed for new students who fall between the above criteria.

The department also offers many elective courses, descriptions of which may be found in the *Course of Study*. Over one-third of all mathematics is taken electively, much of it in preparation for the Advanced Placement Examinations in calculus. These courses include the study of elementary and advanced calculus, analytic geometry, infinite series, probability, statistics, computer science, linear algebra and vector analysis.

The Mathematics Department is located in Morse Hall, which also houses two computer labs. One lab has 16 IBM Personal Computers (networked) and the other has 7 Apple IIe computers. A variety of computer courses is offered that range from an introduction to computers to preparation for the Advanced Placement tests in Computer Science. Computer languages taught include LOGO and Pascal.



The community of students who like math at Andover is sizeable. They share their curiosity and knowledge by offering to tutor other students at the school, and by participating in interscholastic competition under the aegis of the Math and Computer Clubs.

MATHEMATICS

Courses leading to satisfaction of the diploma requirement

Elementary Algebra

Algebra Review

Geometry

Algebra Consolidation

Geometry and Precalculus

Intermediate Algebra

Precalculus

Elementary Functions

Elective Courses

Analytic Geometry

Calculus

Computer Programming: beginning, intermediate and advanced

Linear Algebra and Vector Calculus

Probability

Statistics

Discrete Mathematics

FOREIGN LANGUAGES

As long ago as 200 B.C. the Latin poet Ennius used to say that because he knew three languages he had three hearts. Andover can render no finer service to today's world than to send forth its alumni with many hearts, ready and able to feel for, to understand, and to respond to the millions of people who speak languages other than English.

Acknowledging the importance of foreign languages, Andover requires for the diploma three years of an ancient or modern language. The ancient foreign languages offered are Greek and Latin, the source languages of Western thought and literature. The modern foreign languages offered are Chinese, French, German, Italian, Russian and Spanish. Emphasis is on the spoken word, and the foreign language is the basis for all communication in the classroom. Small classes make possible maximum participation, with supplementary practice provided by our versatile language laboratory. There are

opportunities to join accelerated classes which complete, for example, the work of four years in three.

At the 4th-, 5th- and 6th-year levels the study of literature may be supplemented by courses in the art, history, geography and music of the foreign country. In upper-level courses students can prepare for Advanced Placement Examinations in language and literature and qualify for advanced courses when they enroll in a college. Superior students may carry out independent projects, including apprentice teaching, under careful guidance.

At all levels of study progress in the foreign language is facilitated, and the resources of the classroom are expanded, through occasional use of communication media (periodicals, radio, videotapes, computers) and such activities as the staging of plays, the use of the school's radio station for broadcasts in foreign languages, festivals, language tables in the dining room, movies, clubs, visits by performing groups, and trips to language events in Boston and at nearby schools and universities. Students are urged to consider opportunities, sponsored by Andover or by other schools, to live and study abroad.

For Andover's School Year Abroad program, and other foreign off-campus opportunities, see page 44.

Chinese

Traditions in China are deep and have been unfamiliar to Western eyes and ears for centuries. In the modern world we have a shared future. Understanding and learning the Chinese language is a key to that future. Andover is one of very few secondary schools to commit itself to a fully integrated, four-year program in Mandarin Chinese.

French

Before the outbreak of the French Revolution, French was considered the universal language of the West. It was the language of diplomacy, was already flourishing as a literary medium and, because of its clarity and precision, reflected both French culture and philosophy, influencing the development of democratic institutions in the

United States as well as in other countries. The study of French rewards the student with the ability to communicate with French-speaking peoples and to appreciate the importance of order in expression, broadening his views through a growing familiarity with the rich and lively literature and civilization that the language represents.

German

German is central Europe's principal language, and knowledge of it opens up an understanding of European culture and affairs. Students may learn German to read the works of Goethe, Schiller, Lessing, Kafka, Hesse, Brecht and Grass in their original form, or to follow the arguments of Hegel and Nietzsche, or perhaps to understand more intimately the background of modern socialism and democracy in the world. Many of the most important developments in modern physics, electronics, chemistry and engineering were originally published in German, and American businesses are realizing increasingly the importance of personnel able to speak German.



Greek

Through the study of Greek, the Department of Classics offers students a feast at the banquet of the first and still most relevant literature of the Western World. Through direct experience with such men as Homer and Plato, students will discover a sense of order and ideals in the expectation that they may apply it, in turn, to the challenges they face today. Greek, as one of the languages chosen to fulfill the diploma requirement, is often elected by students as a second or even third language in conjunction with Latin or a modern language. It remains an important basic course for students with a deep interest in literature or philosophy.

Italian

The growing popularity of Italian in American schools and colleges reflects a growing awareness of the charm of the Italian language and of the rich cultural heritage which it serves. Andover's intensive course for Seniors attracts students with rich experiences in other languages, is conducted in Italian, and has the scope and pace of a course for college freshmen.

Latin

Latin—still? Yes, as futuristic nightmares and present turmoils are reawakening a search for order, perspective and ideals in the human experience, names like Cicero, Vergil, and the *pax Romana* not only symbolize great milestones in that search but also suggest habits of mind that produce enduring greatness—the same habits of mind that show up so clearly in a sentence, paragraph or entire work of Latin literature.

Through the study of Latin, the Department of Classics offers students direct experience in Latin literature, both in the original and in translation, which is rightly called the mother tongue of Western Civilization. Latin, as one of the languages frequently chosen to fulfill the diploma requirement, is also often chosen as a second or third language. It is a particularly valuable experience for students of other European

languages who have an interest in doing advanced study in foreign languages.

Russian

Approximately forty percent of Russian secondary school students are learning English. A fraction of one percent of American secondary school students study Russian. For cooperation, understanding, and influence, our doctors, diplomats, scientists, and businessmen should be able to communicate with Soviet counterparts in Russian.

Since secondary school is the best place to begin, Andover has established a rich program for our beginning as well as our advanced students.

Spanish

The Spanish Department is anxious to help students discover the varied cultural heritage of the Spanish-speaking world through intensive study of the language, both spoken and written.

It seems particularly important to learn a language spoken everyday by millions of Americans across the U.S. In addition, Hispanic literature, from Cervantes to Borges, has played a vital role in world literature, as attested by the frequency with which Hispanic writers have been awarded the Nobel Prize for Literature.

Students who enter the professions will find Spanish an indispensable tool. But whatever they do, Spanish will be the key to a richer, more rewarding life.

The Language Laboratory

The Language Laboratory, located on the second floor of Samuel Phillips Hall, is a facility designed to expand and enhance the classroom experience in foreign languages. Consisting of a microcomputer-controlled cassette system, the lab offers a variety of teaching and learning possibilities for classes or individual students. With a master console and 28 student positions, the lab is always available and supervised during class hours and evenings.

FOREIGN LANGUAGES

Italian offers an intensive introductory course for seniors. All other languages offer introductory and intermediate courses, with opportunities for acceleration at those levels. Students are then eligible for the following courses:

Chinese

Literature, Philosophy and
Language Review
Literature, History and Current
Events

French

Language and Review and
Contemporary French Life
Selected Readings
Village Français
French Civilization
Conversation and Phonetics
Written Expression
Literature and Film: French
Theatre
French Literature
French History
French Civilization Outside of
Europe
Québec et les Québécois
Stylistics

Advanced Placement
Contemporary Literature

German

Literature, Composition and
Conversation
Language and Literature for
Advanced Placement
Special Topics

Greek

First Year: basics of language and
culture
Accelerated First Year: two years
in one
Second Year: Xenophon, Plato,
New Testament
Third Year: Homer and Euripides
Fourth Year: Sophocles, lyric
poetry, Thucydides

Latin

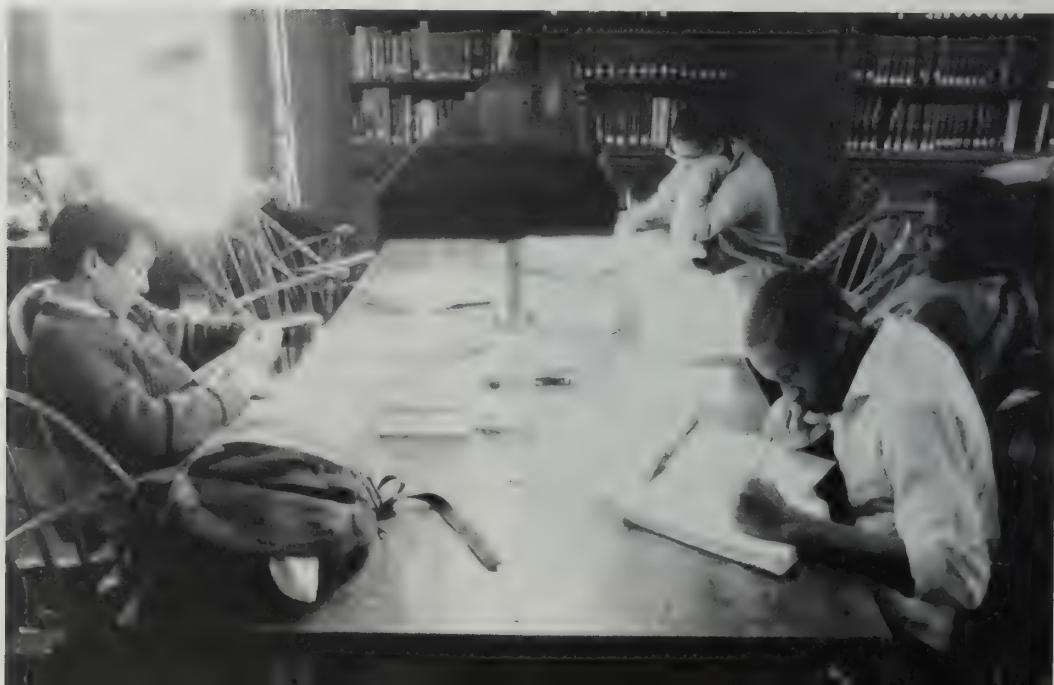
First Year: basics of language and
culture
Accelerated First Year: two years
in one
Second Year: Cæsar, Ovid, Nero
Third Year: Cicero, Vergil,
Apuleius
Fourth Year: Vergil, Suetonius,
Catullus
Fifth Year: Vergil, Tacitus, Pliny,
Horace

Russian

Literature, Composition and
Conversation
Advanced Literature, Composi-
tion and Conversation
Russian Press
Literature
Special Topics
Russian History and Literature

Spanish

Second and Third Year, Ad-
vanced, with winter term in
Mexico
Spanish Language Review
Aspectos de la Cultura y Civiliza-
ción del Mundo Hispánico
Introduction to Literature, with
Grammar Review
Literature and Culture, with
Grammar Review
Literature for Advanced Place-
ment
Advanced Studies in Literature
Special Topics: Literature,
Sociology, Culture
Latin American Studies



PHILOSOPHY AND RELIGIOUS STUDIES

The department seeks to initiate students into three distinctive and interrelated human quests: the search for meaning, the search for justice and the search for the foundations of knowledge. The process of initiation is intended not only to provide an introduction to outstanding literature in the field, but also to assist the student in effecting personal appropriation of the search and in developing the necessary qualities and skills for its pursuit.

The department is committed to exploring these basic human concerns with imaginative empathy and by means of dialogue and rational inquiry, so far as these may take us. It seeks to encourage growth in understanding and empathy among different cultures, traditions and social groups. Beyond this the department is not committed to any particular pattern of expression or response to the area of study. No topic, subject or pattern is excluded a priori. Decisions on course offerings and academic projects take into account the interests and background of the students and faculty and the potential for furthering general departmental goals.

Courses are term contained, involve four prepared class periods and are offered at various levels on the following topics:

The Biblical World View
The New Testament Perspective
Religious Discoverers
Varieties of Religious Experience
Introduction to Non-Western Religions
Introduction to Ethics
Proof and Persuasion
Responses to the Holocaust
Views of Human Nature
Law and Morality
Bioethics
Nonviolence in Theory and Practice
In Search of Meaning
Existentialism
In Search of Justice
Great Philosophers

SCIENCE

Biology

Andover provides ample opportunity to develop interest in the biological sciences. In addition to two yearlong courses in introductory biology, the department offers three courses on the advanced placement level, three intermediate courses, and three elementary courses which are particularly well suited to serve younger students. The introductory courses give students a general background and an understanding of some of the current trends in biology. Field trips, laboratory work, independent projects, lectures, slides, films, and video tapes are all part of the courses. Most of the laboratory work performed during the spring term is devoted to independent projects.

The intermediate courses provide an exposure to biology for students who prefer chemistry and physics (since the science requirement specifies some work in both the biological and the physical sciences) as well as providing additional work in biology for students who enjoyed the introductory courses.

Because of recent changes in the Advanced Placement examination we have chosen not to offer a course specifically directed at advanced placement. Students who are particularly interested in biology are encouraged to take biology as juniors or lowers, followed by a year of chemistry and a year of physics, and then to take those advanced biology courses which interest them. The term-contained advanced courses review material presented in introductory courses, present new concepts and techniques, and permit us to study some topics in considerably more depth than is usual in a typical Advanced Placement course. The laboratory and field work in these courses gives students experience with the techniques of chromatography, electrophoresis, spectrophotometry, statistical analysis, dissection, and genetic engineering, as well as qualitative and quantitative field analyses. Computer simulations are also used on our Apple II microcomputers. Many students who take the advanced sequence take the Advanced Placement examination.



Bird watching trips are sponsored occasionally throughout the year by the Natural History Club for interested students who may or may not be enrolled in a biology course. A small animal collection consisting of rats, mice, gerbils, and various reptiles is maintained in Evans Hall. Its population varies with student interest, the reproductive rate of the animals and the dietary needs of the resident boa. In the basement of Evans Hall there is a superb bird collection on loan from Harvard University and an extensive shell collection is exhibited in various parts of the building.

The Evans Hall greenhouse is a refreshing place to visit during the long winter months. Students grow plants there or start potted plants for their own rooms. An environmental growth chamber is available for those interested in experimenting with photoperiodism.

Chemistry

A variety of Chemistry Department offerings are designed to suit the range of interests and abilities of the students in their study of the composition and interactions of the physical world. Three levels of yearlong courses introduce students to atomic structure, elements, chemical

reactions, bonding, gases, liquids, solids, solutions, thermochemistry, kinetics, acids and bases, electrochemistry, nuclear reactions, and organic molecules. There are Advanced Placement offerings for one year or two years of study. In addition, a series of term courses are offered in such areas as general chemistry, organic chemistry, chemistry of nutrition, environmental chemistry, geology, chemical research, and, for ninth graders, an introduction of elements and compounds, which is a lab-oriented class.

The observation and interpretation of chemical phenomena are central in the chemistry curriculum. Students perform laboratory experiments related to course work as well as observe classroom demonstrations. A quantitative understanding of these phenomena is achieved through frequent problem solving. Class library projects, in which students read in the literature on the greenhouse effect, acid rain, and toxic wastes, aim for an appreciation of the application of chemical principles to the "real world."

The department has excellent equipment for experiments in elementary syntheses and analysis, including analytical balances, visible and infrared spectrophotometers, pH meters, voltmeters, a gas chromatograph and a bench top furnace.

Physics and Astrophysics

The Physics Department offers several introductory courses at various levels of difficulty in order to meet the needs of Andover students. Some representative topics are mechanics, waves, heat, electromagnetism, light, and "modern physics." Laboratory work, classroom demonstrations and extensive problem solving enable students to develop both a qualitative and quantitative understanding of the concepts of physics. Also offered are courses including electronics, astronomy, relativity and early quantum theory, and university-level Advanced Placement physics.

The Physics Department operates the Thornton Observatory which houses a research-grade 16-inch reflector, a 6-inch Brashear refractor and six other portable telescopes. These instruments are used in astronomy courses as well as in

project work; recent projects have included such areas as solar, lunar and planetary study; astrophotography; computer simulations; and orbit analysis.

The department is well equipped with laboratory and demonstration equipment such as an air track to eliminate friction, photogates for precise timing, cathode ray oscilloscopes for a multitude of uses, and computers for rapid data analysis, word processing or programming. These items and many more are available and used in classroom demonstrations and student laboratory work.

Past student projects have included laser transmission of information, holograms, the construction of an electronic calculator, speed of light measurements, determinations of the electronic charge and mass, interferometer measurements, and finding the gravitational constant.

PSYCHOLOGY

The Psychology Department offers a variety of elective courses which examine fundamental concepts in the field. Particular emphasis is placed on helping the student explore the interface between psychological knowledge and personal growth. This is accomplished by utilizing teaching strategies which integrate formal academic work with frequent opportunities for student participation and self-exploration. The Introductory Psychology and Developmental Psychology courses offer an overview of the fundamental ideas and classic experiments in psychology and consider the complexity of human and social development. The Human Relations course examines how individuals behave in groups and how healthy relationships are formed and maintained.

Biology

Introduction to Zoology
Oceanography
Ornithology
Introductory Biology
Biology
Human Ecology
Human Biology
Animal Behavior
Ecology and Evolution
Human Physiology
Molecular Biology
Laboratory Research in
Biology and Chemistry

Chemistry

Elementary Introductory
Chemistry
Introductory Chemistry
Research in Chemistry
Elementary Organic Chemistry
Advanced Placement Chemistry
Honors Introductory Chemistry—Advanced Placement
Geology
Physics
Observational Astronomy
Cosmology—The Universe
Beyond the Solar System



Dr. Charles Abbot, class of 1891, a solar energy pioneer and head of the Smithsonian Institution for many years, predicted in the early 1940's that solar energy would become the primary source of power when oil and coal were depleted. In 1972 he received his last patent, for a device to convert solar energy into electricity, shortly before his 100th birthday.

Introductory Physics

Advanced Physics

(B-level, Advanced Placement

C-level, Advanced Placement)

Electronics

Relativity and Quantum

Mechanics

PSYCHOLOGY

Introductory Psychology

Human Relations

Developmental Psychology

OTHER COURSES

STUDY SKILLS

Basic Study Skills

Efficient Reading Skills

Language Skills

PHYSICAL EDUCATION

All Juniors and new Lower

Middlers are required to elect

one trimester of P.E. 10 in

addition to their regular athletic commitment.

Physical Education



Complementary Programs

Andover's complementary programs combine a number of innovative ideas designed to promote better coordination between public and private education nationally. The concept behind these programs is that of multiple schools. While one school may be accepted as the "home-base" diploma-granting institution, several other institutions may be utilized as complements to this school. Thus far, the multiple schools idea has taken form in several program models which are open to Phillips Academy students as well as students from other schools.

The Andover Summer Session

The Andover Summer Session is a short, intensive academic program in which both innovative and traditional courses are taught in only six weeks. Courses in all subjects and at all levels demand hard work—harder work than most students have ever before experienced. Besides English, modern languages, mathematics, history, and the sciences, the curriculum offers such opportunities as Play Production Workshop, Social Psychology, Great Philosophers, Law and Morality, Modern Astronomy, Oceanography and Marine Biology, and Economics.

Other features of the Summer Session are special courses in writing, including the nationally known "Competence in Writing" (developed at Andover); an expanded ESL Program (English as a Second Language) for foreign students who wish to achieve English fluency; a Chamber Music Program which provides a unique opportunity for able music students in all combinations of piano, strings, winds, and voice, including individual instruction, small ensemble work, orchestra, and chorus; and an intensive Studio Art program for serious students of the visual arts who wish to develop a portfolio in preparation for the Advanced Placement Examination in Studio Art.

The Summer Session makes use of all the school's facilities and is open to able boys and girls from all parts of the country and abroad. Applicants must be graduates of the 10th, 11th or 12th grades. A catalog can be obtained by writing:

Phyllis Powell, Director
The Andover Summer Session
Phillips Academy
Andover, MA 01810
Tel. (617)* 475-3400, ext. 292

(MS)²: Math and Science for Minority Students

The (MS)² Program—Math and Science for Minority Students—offers black, Hispanic, and American Indian students from selected urban centers three consecutive tuition-free summers of intensive study of mathematics and science. Ninth grade boys and girls are selected on the basis of their superior ability and strong interest in mathematics and science, as well as financial need. The goal of the (MS)² Program is to prepare minority students to compete successfully for admission to selective colleges and for careers in science, engineering and medicine. Further information can be obtained by writing:

Walter A. Sherrill, Director
(MS)² Program
Phillips Academy
Andover, MA 01810
Tel. (617)* 475-3400, ext. 293

**Note: as of 7/88, area code (508)*

Students currently enrolled at Phillips Academy's regular session are ineligible to attend the Andover Summer Session or the (MS)² Program. Students attending the Andover Summer Session or the (MS)² Program may not apply for admission to the Academy's regular session for a full calendar year.



Randy Pepper, an instructor in English, author, and a contributing photographer to *National Geographic* magazine, created a new course in the 1985 Summer Session entitled "Oceans." A combination of marine biology, environmental studies, and oceanography, the course includes four weeks of study in the labs at Andover, and two weeks "in the field," sailing along the New England coastline aboard the 55' schooner *Madame Sarah Abbot*, named for the founder of Abbot Academy.

School Year Abroad

School Year Abroad offers to qualified Upper Middlers and Seniors a full academic year of living and studying in France or Spain. Originated by Andover, SYA is now jointly sponsored by Andover, Exeter and St. Paul's School. The program gives American students the advantages of living in a foreign culture without sacrificing progress at their home schools or strong preparation for college. Students live with host families, participate in the activities of local athletic and social clubs, and pursue a course of study (both in English and Spanish or French) under the supervision of sponsoring school teachers. SYA offers over two weeks of group travel, all college boards, and provides full academic credit, permitting students to graduate from Phillips Academy with their own class. School Year Abroad is financially independent of its sponsoring schools. Financial aid is available. A catalog can be obtained by writing:

Woodruff W. Halsey II, Director
School Year Abroad
Phillips Academy
Andover, MA 01810

Trimester Programs in Foreign Countries

Andover offers small numbers of qualified students trimester programs in several foreign countries. It is possible for advanced language students to attend a local school in the following cities: Fall Term, Novosibirsk, Soviet Union; Paris, France; Winter Term, Göttingen, Germany; Madrid, Spain; Antibes, France; Spring Term, Guadalajara, Mexico; Bologna, Italy; Beijing, China; summer, Harbin Institute of Technology, Harbin, China; University of Salamanca, Salamanca, Spain. Each program has its special characteristics. For more information consult the Chair of the Division of Foreign Languages.

Other Off-Campus Programs

Andover offers several complementary residential programs. The Washington Intern Program, sponsored by Andover and Phillips Exeter Academy, allows a group of Upper Middlers and Seniors to spend the spring term in Washington working in the offices of U.S. Senators and

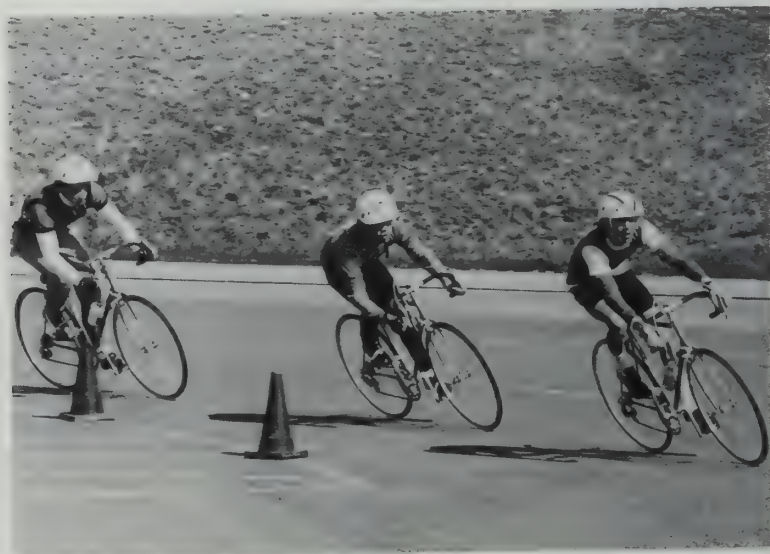


Representatives. Phillips Academy tuition, fees, and financial aid do not cover the cost of this program.

The Mountain School Program of Milton Academy is a semesterlong program for eleventh graders which offers students the opportunity to enjoy a different living and learning experience on a 300-acre farm in Vermont. Phillips Academy students may participate fall term only. Students will continue their academic courses in addition to activities which will emphasize practical skills and crafts. Students will work on the Mountain

School farm which supplies most of the food and heat for the school.

In addition to the School Year Abroad Program, term-contained opportunities for study abroad are available for Seniors with advanced language skills. It is also possible for Seniors to arrange off-campus projects related to their special interests, though tuition rebates are not normally granted for projects which are not part of school-sponsored programs.



Athletics



Following the merger of Abbot and Phillips Academies in 1973, the girls began to share more than the classroom with the boys. The first Phillips Academy Girls' Varsity Ice Hockey team was formed in 1977, and continues today with matches against many independent schools, colleges and universities in New England.

In sports, as in studies, students are expected to meet basic requirements and are given wide choice in broadening and deepening their skills, interests and dedication in athletics.

Juniors and new Lowers take a challenge-based Physical Education Course five hours a week for one term in addition to afternoon athletics. While taking this course, students are tested for physical aptitude and instructed in safety, health and exercise physiology.

The required afternoon athletic program includes a wide variety of offerings in varsity and sub-varsity competitive interscholastic sports, in intramural cluster-organized athletics and in instructional, recreational and fitness activities. New students are strongly encouraged to participate for at least one term at Andover in a team sport or a dance performance program.

Each spring the department offers an evening Senior Life Saving course and a Water Safety Instructors' course, in addition to required athletics, for those swimmers who wish official accreditation.

The school maintains several athletic facilities which include 17 playing fields and 25 tennis courts; the Borden, Memorial and Abbot Gymnasium Complex with swimming and diving pools, basketball and squash courts, two dance studios, wrestling room, and weight training rooms; the Case Memorial Cage with its indoor track; the Sumner Smith Hockey Rink; the crew boathouse on the Merrimack River; the ski trails and jump at Holt Hill; and finally the Search and Rescue Room in Evans Hall which provides the base of operations for Andover's popular outdoor program.

Phillips Academy is committed to a required athletic program that provides a variety of sports and activities to its students. The Academy discourages overspecialization in sports at this age level. The Athletic Department oversees the program and its facilities with the support and advice of the Faculty Athletic Committee and the Student Athletic Advisory Board.

Isham Health Center

Phillips Academy employs a full-time physician/medical director, a licensed nurse-practitioner, and twelve registered nurses to staff Isham Health Center. Isham has approximately 600 inpatient admissions and 7500 outpatient visits per school year. There are two dentists and a full time dental hygienist who are available for

routine care and emergencies. A sports medicine clinic is run weekly by a board-certified orthopedic surgeon, in conjunction with three full-time athletic trainers who supervise rehabilitation, practices and athletic competitions. A dermatology clinic is held monthly and a registered dietitian is available for consultation with students upon request. The Graham House Counseling Center employs three psychologists, who are available to students seven days a week.

The Isham staff maintains close contact with approximately forty medical and dental specialists in the greater Lawrence and Boston communities, who are readily available for consultation. Isham Health Center also welcomes requests for follow-up and continuing care from students' home physicians.

ATHLETICS

FALL TERM

Boys

Ballet
Crew
Cross-Country
Cycling
Football
Jogging & Fitness
Karate
Modern Dance
Paddle Tennis
Search & Rescue
Soccer
Squash
Table Tennis
Tennis
Water Polo
Yoga

Girls

Ballet
Crew
Cross Country
Cycling

Field Hockey
Jogging & Fitness
Karate
Modern Dance
Paddle Tennis
Search & Rescue
Soccer
Squash
Table Tennis
Tennis
Volleyball
Water Polo
Yoga

WINTER TERM

Boys

Aikido
Ballet
Basketball
Fitness
Gymnastics
Hockey
Jogging & Fitness
Modern Dance

Paddle Tennis
Search & Rescue
Skiing:
Competitive (Alpine and Nordic)
Recreational (Cross Country)
Squash
Swimming
Track
Wrestling
Yoga

Girls

Aikido
Ballet
Basketball
Fitness
Gymnastics
Hockey
Jogging & Fitness
Modern Dance
Paddle Tennis
Search & Rescue

Skiing:
Competitive (Alpine and Nordic)
Recreational (Cross Country)
Squash
Swimming
Track
Yoga

SPRING TERM

Boys

Ballet
Baseball
Crew
Cycling
Golf
Jogging & Fitness
Karate
Lacrosse
Modern Dance
Recreational Cycling
Search & Rescue
Softball

Squash
Team Cycling
Tennis
Track
Yoga

Girls

Ballet
Crew
Cycling
Golf
Jogging & Fitness
Karate
Lacrosse
Modern Dance
Paddle Tennis
Recreational Cycling
Search & Rescue
Softball
Speedball
Squash
Team Cycling
Tennis
Track
Yoga



In the 1840's the widow of Principal Osgood Johnson devoted herself to the care of sick Seminary students at Samaritan House, built and named for that purpose, now a student dormitory. In spite of this, rows of gravestones mark the toll of epidemics. An Academy graduate of 1890 reports that no such care as Widow Johnson's was available to the Academy students of the 1890's: "There was no infirmary. If you were ill, it was nobody's business but your roommate's, who brought you meals from Marland's unappetizing fare."

CALENDAR 1989-90

Fall Term

Sept. 10, Sun.	Faculty return
Sept. 14, Thurs.	New students arrive and register
Sept. 16, Sat.	Old students return and register
Sept. 18, Mon.	Classes begin
Oct. 13, Fri.	Mid-term academic review
Oct. 20-22 Fri.-Sun.	Parents' Weekend (all parents)
Oct. 23, Mon.	No classes
Nov. 21, Tues.	Thanksgiving vacation begins, 1 p.m.
Nov. 27, Mon.	Thanksgiving vacation ends, 8 p.m.
Dec. 4, Mon.	Classes end, 1 p.m.
Dec. 9, Sat.	Holiday vacation begins, 12 noon

Winter Term

Jan. 3, Tues.	Holiday vacation ends, 8 p.m.
Feb. 2, Fri.	Mid-term academic review
Feb. 5, Mon.	Mid-winter holiday (no classes)
March 7, Wed.	Classes end, 1 p.m.
March 10, Sat.	Spring vacation begins, 12 noon

Spring Term

March 27, Tues.	Spring vacation ends, 8 p.m.
April 23, Mon.	College Visiting Day (no classes)
April 27, Fri.	Mid-term academic review
May 26, Sat.	Classes end, 12 noon
June 3, Sun.	Commencement
June 8-10 Fri.-Sun.	Alumni Reunions
June 28, Thurs.	Summer Session begins
Aug. 8, Wed.	Summer Session ends

Admission

"Youth from Every Quarter"

The School's *Constitution*, written in 1778, states that Andover "shall be ever equally open to Youth of requisite qualifications from every quarter." With this principle in mind, the basic requirement for admission to Andover today continues to be evidence of sound character and strong academic achievement. The school is especially interested in candidates who demonstrate independence, maturity and concern for others, in addition to high performance in particular studies or activities. Valuing diversity in its student body, the school seeks to bring together a community from all parts of the country and from many nations.



Office of Admission and Financial Aid: Pictured left, bottom: Scott Looney, assistant dean of admission; Jeannie Dissette, dean of admission; Peter Drench, associate dean of admission; top: Grace Taylor, administrative assistant to the dean; Bobby Edwards, associate dean of admission; Beth Moore, associate dean of admission. Not pictured, Clement Morell, director of financial aid; John O'Brien, assistant dean of admission; Holly Weston, admission officer.

In our experience, chronic illness, handicaps or other limitations are not a barrier to success at Phillips Academy. The school will discuss such problems individually and advise on the appropriateness of the application. Our ultimate goal is to insure the health and happiness of every student.

The school's endowment covers approximately one-third of the cost of an Andover education. Therefore, in fact, every student receives financial aid. In addition, because of the generosity of a large number of alumni and friends, further financial assistance is available (see Financial Aid Section, page 52).

APPLICATION PROCEDURE

Priority will be given to those candidates who complete the application procedure, including the interview, by February 1. A decision from the Admission Committee will be mailed on March 10. The possibility of admission is considerably lessened for all applicants who complete the process after February 1, and decisions for this group may not be rendered before May 1. A deposit of \$300 is required to reserve a place at the time admission is offered to an applicant.

If you have a question:

About Andover's admission or application procedures, call or write the Admission Office.

About an appointment: call or write the Appointment Secretary, Admission Office.

To request a catalog, call or write:
Admission Office
Phillips Academy
Andover, Massachusetts 01810

Admission Office direct line:
(508) 475-9353

Academy switchboard:
(508) 475-3400 x 596

Office hours:

Monday through Friday, 8:30 a.m. to 4:30 p.m.
Saturday, 8:30 a.m. to 12:00 noon, October 1 through January 31.

Steps To Be Completed For Application

1 Submit The Preliminary Application Card and the non-refundable \$30 fee as soon as possible. (Checks are payable to the Trustees of Phillips Academy.) **Applications will not be considered unless the Preliminary Application Card and Fee are received.**

2 Complete The Personal Interview Requirement. Candidates must complete the required interview by February 1. Candidates are urged to schedule interviews in either the spring, summer or early fall of the year before they intend to matriculate. It is in everyone's best interest for the interview to take place as early as possible. A visit to the Academy is desirable as it gives candidates a chance to have questions answered and to see the school. Please allow two hours for the tour and interview and be sure to dress with the weather in mind. **Candidates who cannot visit the Academy are themselves responsible for arranging an interview with an Alumni Admission Representative (See page 55.)**

3 Return The Final Application Forms. Final application forms, mailed in mid-November to candidates who have filed preliminary applications, should be completed and returned **as soon as final or mid-semester grades are available for the fall term. The transcript must include current grades for application to be complete.** Priority consideration is given to applications completed by the advertised deadline of February 1. ("Late applicants" should return forms immediately.) Teacher recommendations should be from current teachers.

4 Take The Secondary School Admission Test. (12th Grade or Postgraduate candidates are not required to take the SSAT.)

Secondary School Admission Test

The Bulletin of Information for Candidates, published by the Educational Testing Service, Princeton, NJ 08540, will be sent by Andover to all 1989-90 candidates who have filed a Preliminary Application. This Bulletin describes the Secondary School Admission Test, which will be given on the following dates:

December 9, 1989	January 20, 1990*
March 3, 1990	April 28, 1990*
June 16, 1990	

**International administration*

Candidates are strongly urged to take the SSAT administered in December, 1989. (The December test will not be given in foreign countries.) Otherwise, the candidates should take the January, 1990 administration.

Early Decision

Andover does not participate in any early decision plan for admission.

Twelfth Grade Or Postgraduate Candidates

Instead of the Secondary School Admission Test, Senior and Postgraduate candidates must take either the Preliminary Scholastic Aptitude Test (P.S.A.T.) or the Scholastic Aptitude Test (S.A.T.) of the College Board Scholastic Aptitude Tests (C.E.E.B., Box 592, Princeton, NJ 08540).

Postgraduates are full-fledged members of the Senior Class and are eligible for all school activities. Because of their academic credits, they frequently have maximum flexibility in course selection.

School Costs and Financial Aid

Tuition and Fees, 1989–1990

The tuition charge for 1989–1990 is \$13,500 for boarding students and \$10,300 for day students.

The average annual cost to educate a student at Andover is approximately \$19,400. The difference between the annual cost and the tuition charge is made up from gifts and income from endowment, which itself is the product of the generosity of alumni, parents and friends.

Day Students

Effective at the start of the 1990–91 academic year, Phillips Academy will change its policy on who may apply as day students. Beginning in September, 1990, students residing in several cities and towns may choose whether to apply as day students or as boarders.

Important: This is a one-time only choice which must be made when the application is submitted to the Admission Office.

Students residing in Andover or in North Andover *must* apply as day students. Applicants from the following cities and towns have a choice: Atkinson (NH), Boxford, Dracut, Haverhill, Lawrence, Lowell, Lynnfield, Methuen, Middleton, North Reading, Pelham (NH), Plaistow (NH), Reading, Salem (NH), Tewksbury, and Wilmington.

Families are urged to consider carefully all aspects of each option, including transportation, finances, accessibility to the variety of on-campus activities, and the relative merits of home living vs. school residence for the student. The Admission Office will be happy to assist families in reaching the best decision for their needs.

To reserve a student's place for a given school year, a deposit in the amount of \$300 must be received by May 1 in the case of a returning student, or by the acceptance deadline in the case of a newly admitted student. It is non-refundable under any circumstances.

The tuition less the above deposit is billed in two equal amounts, with the fall payment due August 1, and the final payment due December 1. The award of scholarship aid or loan reduces the billed amount accordingly. An alternative is the use of the Insured Tuition Payment Plan, arranged with a private agency. Information about this alternative and an application form are sent to the parents before the first bill is due. No refund will be made of the fall tuition for any student who withdraws, is dismissed, or is absent for any reason after registration in the fall. No refund will be made against the final payment for any student who withdraws, is dismissed, or is absent for any reason after returning to school at the beginning of the winter trimester.

An optional Tuition Refund Plan is offered, at 2.5% of tuition, to protect against the departure of a student for any reason. Under this plan 75% of the unused portion of the tuition for school days remaining is refunded. Tuition covers instruction, board, room (including basic furniture), physical training and most athletic privileges, use of laboratory equipment and material, admission to all authorized athletic contests and most authorized entertainments at George Washington Hall or elsewhere on campus, including the Saturday evening movies.

The school charges do not include tutoring, language training, special instruction in music or certain athletics, materials fees for art courses, medical expenses, laundry, textbooks, dues to school organizations or breakage and damage to school property. The school charges do not include cost of participation in the Washington Intern Program, School Year Abroad, or other off-campus programs. The school provides sports uniforms and most athletic equipment. Students are required to bring their own footwear and urged to bring along whatever other personal athletic

equipment they already possess. Bills for items not included in the school charges may be rendered at any time during the school year. All charges must be paid by their due date in order to assure a student's place at the Academy. Students with past-due bills may be asked to leave any time. The diploma of the Academy will not be awarded to Seniors whose school accounts are not paid in full by June 1.

Other Expenses

The following expenses will generally be similar to those a student would experience if he or she were at home: athletic equipment; laundry and cleaning; dues and publications and spending money. Travel expense will vary according to home location. Books and supplies depend on course selection, and are approximately \$750.

Financial Aid

Financial need should never discourage a student from applying for admission to Phillips Academy. Andover offers full Scholarship Grants for low-income families; Scholarship Grants and low-interest, deferred-payment Student Loans for a broad spectrum of need, and Parent Loans for upper-middle income families.

Scholarship Grants: \$4,400,000 in 1988-89
Average grant for returning students: \$9,000

Student Loans: \$250,000 in 1989-90
(presently at 6% interest)

A moderate-interest Parent Loan Program is available to upper-middle income parents who do not qualify for Scholarship Grants or Student Loans, to help them spread educational costs more evenly over the school and college years.

Parent Loans: \$275,000 available in 1989-90
(presently at 9% APR interest)

If you are not sure whether you qualify for fi-



nancial aid of some kind, we encourage you to apply; this is the best way to find out.

Because Andover values and seeks an economically diverse student body, aid is awarded only on a basis of demonstrated need. Need depends on many variables, such as family income, number of children, age of parents, other tuitions, unusual medical expenses, taxes, assets, liabilities, etc.

To apply for financial aid:

1. When you make out the Preliminary Application be sure to check "yes" for financial aid.
2. Andover will send you the Parents' Financial Statement (PFS). Fill it out and send the original to the School Scholarship Service (SSS) in Princeton, NJ. The SSS uses a formula nationally accepted among independent schools to analyze need, and provides Andover with a preliminary estimate of your family's ability to contribute to educational expenses. The process assures that all schools to which a student applies will base their calculations on the same data.
3. Send a copy of the PFS to Andover *prior to January 15*, along with the most recent IRS 1040 form, or other income tax form used.

Requests for aid filed after the January 15 deadline may not be processed in time to be included in the initial allotment of scholarship funds. Requests filed after January 15 must await subsequent availability of scholarship monies.

In case of divorced or separated parents:

The resources of both natural parents must be considered in cases where a divorce or separation has taken place. This information should be included on the financial statement provided by the school. The availability of complete information from both parents is essential to assure a fair assessment of the family contribution. Lack of this information may result in no award of aid or an arbitrarily low financial aid package.

Financial aid award letters are mailed in the same envelope as the Certificate of Admission, on March 10.

Parent Loan Plan:

A Parent Loan Plan is available, at a modest rate of interest, to families in the \$50,000 to \$100,000 income range, as their needs require, with preference given to students entering 9th and 10th grades. Repayment of these loans begins immediately, but repayment of the principal is deferred during the students' college years and then continues for two additional years.

For more detailed information, direct your letter or telephone call to the Director of Financial Aid, Phillips Academy, Andover, MA 01810. Telephone: (508) 475-3400 (ext. 596).

Alumni Admission Representatives

While it is advisable from the student's point of view to visit the school, distance frequently renders a visit impractical. When this is the case, the candidate should write or telephone for an interview with the most conveniently located Alumni Admission Representative. (Please see list on page 55.) When you arrange for an interview with an Alumni Admission Representative, please notify the Andover Admission Office of the date of the interview and the name of the interviewer. This procedure will help us keep your records up-to-date. A candidate unable to arrange for an Alumni Admission Representative Interview should communicate with the Admission Office for assistance. All interviews with Alumni Admission Representatives must be conducted by January 31 or the candidate will not receive a March 10 decision. Applicants interviewed after January 31 will be considered as late candidates.

ALABAMA

Birmingham

A. H. Gaede, Jr. '57
Bradley, Arant, Rose & White
1400 Park Place Tower 35203
(205) 521-8323

ALASKA

Anchorage

John K. Brubaker '55
2110 Otter Street 99504
(907) 279-3581

Fairbanks

K. Andre McMullen '66
741 Chena Hills Drive 99709
(907) 479-2964 (H)
(907) 452-4761 (W)

ARIZONA

Phoenix

Richard L. Morse '53
101 N. 7th Street, #159 85034
(602) 621-4828

William C. Torrey '49
4250 East Camelback Road
Suite 115K 85018
(602) 955-0744

Scottsdale

Peter C. Mohr '54
Pinacle Peak Realty
8787 E. Pinacle Peak Road 85255
(602) 451-0212

Tucson

John S. Greenway '42
2200 E. Elm Street 85719
(602) 325-1541

Donald B. Rollings '70
363 S. Meyer 85701
(602) 623-4091

ARKANSAS

Forrest City

Henry Loeb III '39
P. O. Box 748
125 Hill Street 72335
(501) 633-1410

Harrison

James E. Liles '55
1206 Eugene Street 72601
(501) 741-8538



Little Rock

Mose Smith III, M.D. '48
5326 W. Markham St.
Suite 14, 72205
(501) 664-1527

CALIFORNIA

Berkeley

Peter J. Stern '81
1709 Shattuck Ave., #105 94709
(415) 845-5944

Beverly Hills

Thompson K. Vodrey '52
1529 Gilcrest Drive 90210
(213) 275-5529

Burlingame

Maxwell Steinhart '73
1436 Balboa Avenue 94010
(415) 342-1293

Corona Del Mar

John E. Kidde '64
3907 Inlet Isle Drive 92625
(714) 640-7075

Fresno

Geoffrey M. Brittin, M.D. '52
St. Agnes Hospital
1303 E. Herndon Avenue 93710
(209) 449-3120

Huntington Beach

James B. Blackmon '57
McDonnell Douglas
Astronautics
5301 Bolsa Avenue 92647
(714) 786-8500

Long Beach

Alan Fox '60
Petrolane, Inc.
P. O. Box 1410 90806
(213) 427-5471

Los Angeles

David A. Cathcart '57
Gibson, Dunn & Crutcher
333 S. Grand Avenue 90071
(213) 229-7308

Patrick A. Cathcart '64
Hancock, Rothert & Bunshoft
515 South Figueroa Street
Suite 1230 90071
(213) 623-3748

George W. Davis III, M.D. '52
4616 Keniston Avenue 90043
(213) 294-1226

Tony De La Rosa '78
Mitchell, Silberberg & Knupp
11377 W. Olympic Blvd.
(8th Floor) 90064
(213) 312-2000

Russell K. Decker '56
Decker Management Systems
515 S. Flower Street 90071
(213) 489-2170

Walter L. Farley, Jr. '28
12300 1st Helena Drive 90049
(213) 476-1028

Mrs. Elizabeth Figus '42
818 N. Doheny Drive #703 90069
(213) 550-1971

Trevor A. Grimm '56
Kaplanis & Grimm
621 S. Westmoreland Ave.,
#200 90005
(213) 380-0303

Jeffrey Hiroto '77
1133 Hicks Avenue 90063
(213) 264-3498

Joon Y. Kim '80
3748 Westwood Blvd
Apt. 5 90034
(213) 838-3964

Tim McChristian '73
4070 Seaview Ave. 90065
(213) 621-6635

Thompson K. Vodrey '52
Let's Live Magazine
444 N. Larchmont Blvd. 90004
(213) 469-3901

Marina Del Rey
Jeffrey L. Reuben '78
4350 Via Dolce, No. 104 90292
(213) 301-0464

Menlo Park
Carey Orr Cook '61
1065 Trinity Drive 94025
(415) 398-7474

William Ming Sing Lee '51
271 West Floresta Way 94025
(415) 854-4918

Peter W. Lee '60
1100 Trinity Drive 94025
(415) 394-3472

Miranda
Craig B. Reynolds '73
P.O. Box 470 95553
(707) 943-3089

Northridge
Johnson Lightfoote '69
10914 Crebs Avenue 91326
(818) 366-7770 (H)
(818) 783-3472 (W)

Oakland
Patrick J. O'Hern '65
Lawrence Livermore
21 Bowles Place 94610
(415) 422-4874

Frederic C. Thomas '46
P. O. Box 20858 94620
(415) 845-4870

Pacific Beach
Anne W. Rollings '75
P. O. Box 90878 92109
(619) 483-4206

Palo Alto
William D. Sherman '60
Morrison & Foerster
630 Hansen Way 94304
(415) 354-1500

Donald A. Way '63
320 Kellogg Avenue 94301
(415) 323-0445 (H)
(415) 324-0606 (W)

Pasadena
Robert J. Cathcart '64
677 LaLoma Road 91105
(213) 622-5555

Thomas J. Keefe, Jr. '50
710 Pinehurst Drive 91106
(818) 577-2418

F. Jack Liebau '81
Primecap Management
Company
225 S. Lake Avenue 91101
(818) 304-9222

Judy Mustille '66
1146 Wellington Avenue 91103
(818) 793-4964

Pico Rivera
Charles D. Burnside '58
Northrop Corporation
8900 E. Washington Blvd. 90660
(213) 948-8667

Riverside
Peter C. Parsons '55
Riverside County
Publishing Co.
P.O. Box 4157 92514
(714) 689-1122

San Anselmo
H. Leonard Richardson '45
5 Oakhill Drive 94960
(415) 453-4934

San Diego
Norman R. Allenby '51
Hillyer & Irwin, Ste. 1400
530 B Street 92101
(619) 234-6121

Gaylord E. Smith '57
Golden Eagle Insurance
Company
7175 Navajo Road 92119
(619) 463-5800

San Francisco
Hobart M. Birmingham, Jr. '62
Graham & James
1 Maritime Plaza, 3rd Floor
94111
(415) 954-0200

Nathaniel M. Cartmell, III '69
Pillsbury, Madison & Sutro
P.O. Box 7880 94120
(415) 983-1570

Samuel R. Miller '66
Morrison & Foerster
345 California Street 94104
(415) 434-7230

Martin Quinn '60
311 California Street
10th Floor 94104
(415) 956-2828

San Jose
Samuel C. Dysart '46
3337 Lake Albano Circle 95135
(408) 238-2699

San Rafael
William S. Creighton '39
32 Woodoaks Drive 94903
(415) 492-0637

Santa Ana
Reginald D. Barnes, Jr. '58
Crysen Services, Inc.
825 Parkcenter Drive 92705
(714) 835-6505

Santa Barbara
W. Wright Watling '68
Beaver Free Corporation Ste.100
200 E. Carrillo Street 93101
(805) 963-1631

Torrance
Samuel R. Suitt '57
1745 Maple Avenue #73 90503
(213) 320-7864

John R. Thompson '41
22323 Harbor Ridge Lane
Apt. 4 90502
(213) 229-7605

Whittier
Carlos F. Sanchez '75
14515 Imperial Highway 90604
(213) 944-5795

COLORADO

Boulder

Wayne E. Robinson, Jr. '78
4835 Durham Street 80301
(303) 536-4171

Colorado Springs

Josephine Boddington '41
1433 Alamo Avenue 80907
(303) 634-5679

Denver

Anthony T. Accetta '61
1600 Stout Street
Suite 1500 80112
(303) 595-0333

William W. Grant '49
545 Race Street 80206
(303) 321-1566

John F. Malo '40
#7 Polo Field Lane 80209
(303) 893-2175

David C. Wilhelm '38
700 East 9th Avenue 80209
(303) 894-9444

George R. Ireland '74
1428 East 4th Avenue 80218
(303) 744-7664

Englewood

William R. Rapson '63
4480 S. Lafayette 80110
(303) 297-2600

Snowmass

John P. McBride '56
Lost Marbles Ranch
2500 Elk Creek Road 81654
(303) 925-2102

CONNECTICUT

Darien

Peter Hawkins '69
14 Beach Drive 06820
(203) 655-3271 (H)
(203) 655-1023 (W)

George H. Webb, Jr. '50
7 Sherry Lane 06820
(203) 655-2333

David E. Winebrenner, IV '58
27 Briar Brae Road 06820
(203) 323-1874

Greenwich

Gerard E. Jones '55
One Deer Lane 06830
(203) 869-1441

Hartford

Daniel C. Tracy '57
Arthur Andersen & Co.
One Financial Plaza 06103
(203) 280-0576

New Haven

Margaret K. Schwarzer '81
Yale Divinity School
409 Prospect Street 06511
(203) 436-3557

Ridgefield

Peter G. Pappas '63
50 Blackman Road 06877
(203) 431-8148

Stuart Sawabini '73
7 Sugar Maple Lane 06887
(203) 431-3365

Weston

Mrs. Andrew P. Langlois '62
9 Tower Drive 06883
(203) 222-0234

Westport

Robert B. Simonton '50
25 Woody Lane 06880
(203) 227-4060



DELAWARE

Newark

Rev. Mr. John Barres '78
Holy Family Catholic Church
15 Gender Road
P.O. Box 8093 19714
(302) 368-4665

Wilmington

Mrs. Reeves W. Hart '47
18 Briar Road
Briarwood 19803
(302) 764-0361

DISTRICT OF COLUMBIA

Washington

Douglas O. Adler '70
Verner, Liipfert
901 15th Street, NW,
Suite 700 20005
(202) 371-6037

Daniel W. Aibel '76
1113 D Street, S.E. 20003
(202) 475-0011

George Beatty '50
3438 34th Place, NW 20016
(202) 537-0855

Stephen B. Clarkson '55
Gardner, Carton & Douglas,
Suite 750
10010 Pennsylvania Avenue
N.W. 20004
(202) 345-9200

Robert L. Doar '79
2308 Wyoming Avenue 20008
(202) 462-0128

Andrew P. Ireland '48
House of Representatives
2416 Rayburn Hse.Bldg. 20515
(202) 225-5015

Franklin L. Lavin '75
618 E. Street, N.E. 20002
(202) 544-7775

FLORIDA

Clearwater

Daniel H. Jenkins '62
601 Cleveland Street
Suite 700 34615
(813) 441-6118



Jacksonville

Arthur W. Milam '45
Mahoney, Hadlow, Adams
P.O. Box 4099 32202
(904) 354-1100

Robert B. VanCleve, M.D. '50
Riverside Clinic
2005 Riverside Avenue 32204
(904) 387-7689

Miami

Carlos de la Cruz '59
3201 N. W. 72nd Avenue 33122
(305) 599-2337

Marion B. Emmanuel '54
6971 S.W. 134th Street 33156
(305) 253-6363

Roberto Martinez, Esq. '71
2025 Brickell Avenue,
Apt. 1106 33129
(305) 856-3077

David J. Williams II '38
7621 S. W. 56th Avenue,
Apt. A 33143
(305) 448-5600

Naples

Bernard L. Boyle '27
2021 Viewpoint Drive 33963
(813) 261-8848

Robert W. Hattemer '49
440 Spinnaker Drive 33940
(813) 262-2471

Kenneth D. Krier '68
4840 Whispering Pine Way
33940
(813) 263-7197

Pensacola

Peter H. Williams '70
State Attorney's Office
190 Governmental Center 32501
(904) 932-0068
(904) 436-5300

Sarasota

Lawrence S. Crispell, M.D. '38
1512 Pelican Pt. Drive 34231
(813) 966-4588

John D. Pitts '56
324 Bob White Way 33577
(813) 365-3543

Tampa

Ronald J. Floto '61
6422 Harney Road 33610
(813) 621-0233

David A. Kennedy '60
Kennedy, Frost
Investments, Inc.
101 East Kennedy #2975 33602
(813) 221-7525

Winter Haven

Richard C. Cheney '48
Barnett, Banks Trust Co.
P.O. Box 820 33880
(813) 297-1303

GEORGIA

Atlanta

Louis J. Elsas, II, M.D. '54
Emory Univ., Medical
Genetics
2040 Ridgewood Drive 30322
(404) 727-5840

Herbert R. Elsas '28
Sutherland, Asbill & Brennan
3100 First Atlanta Tower 30383
(404) 658-8709

Gregory Googer '74
476 Plainville Drive S.W. 30331
(404) 696-5979

James E. Hackett, Jr. '73
100 Biscayne Drive, C-5 30309
(404) 351-2427 (H)
(404) 350-7000 (W)

Paul M. Nelson '68
3114 Peachtree Dr. N.E. 30305
(404) 240-0094

Timothy S. Perry '65
Alston and Bird
One Atlantic Center
1201 W. Peachtree 30309
(404) 881-7000

Herbert L. Young '53
Mohasco
1755 The Exchange 30339
(404) 951-6000

Columbus

William S. Cain, Jr. '40
P.O. Box 2125 31902
(404) 563-3288

Dalton

Denis P. Donegan '52
C & S National Bank
300 South Thornton Ave. 30720
(404) 226-3000

Savannah

William C. Rhangos, M.D. '49
44 Medical Arts 31419
(912) 355-6615

Roger S. Seymour '44
2 Heathmuir Way 31411
(912) 598-0197

HAWAII

Honolulu

Francis T. O'Brien '61
Suite 2104
Davies Pacific Center
841 Bishop Street 96813
(808) 524-2000

Thomas L. Stirling '59
Stirling & Kleintop
900 Fort Street, #1650 96813
(808) 524-5183

IDAHO

Ketchum,

Thomas B. Campion '60
P.O. Box 538 83340
(208) 726-3289

ILLINOIS

Chicago

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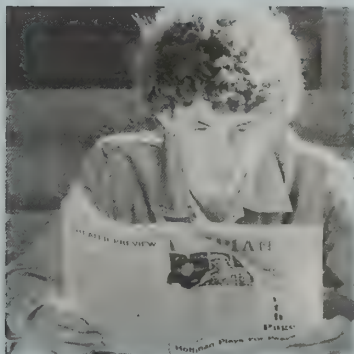
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5-775353

ITALY

Ivrea

David Olivetti '60
Via Monte Leggero 3 10115

JAPAN

Hyogo-Ken

Kiyoshi Kondo '64
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Itami-Shi 664
0727-77-5154

Tokyo

S. Steven Yamamoto '51
University of Tokyo
Department of Physics 113
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KOREA

Seoul

Dong-Kil Cho '74
Chonju Paper Co.,
Dongbang Main Bldg.
150, 2-KA Taepyung-Ro, Chang-Ku
734-0146

MEXICO

John F. Lynch, III '70
Sanchez de la Barquera 77
Col. Merced Gomez 03930
651-0116

MOROCCO

Tangier

Joseph A. McPhillips, III '70
Head, The American School of
Tangier
Rue Christopher-Columbo
212941527

PUERTO RICO

Guaynabo

Ricardo Gonzales '53
A13 Argentine Street
Gardenville 00657

Ponce

Arturo E. Valldejuly '57
El Monte A-104 00731
(809) 836-1050

San Juan

Jorge R. Gonzalez
Vizcafrondo '62
GPO Box 4225 00936
(809) 759-9242

SINGAPORE

Bryan G. Miller '66
16 Raffles Quay #36-00
Hong Leong Building
65-321 8965

SWITZERLAND

Geneva

John J. Ryan, III '45
J. J. Ryan & Sons, Inc., c/o CISA
13 Avenue de Bude
(022) 734-55-50

Zurich

Heimeran von Stauffenberg '54
Im Braechli 56
(01) 55 09 41

THAILAND

Bangkok

Andrew Quinn '81
American Embassy
95 Wireless Road
252-5040

Palachai Meesook '71
Boonyium & Associates Ltd.
39/5-9 Srinakarin Road
02 321-6989

VENEZUELA

Caracas

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2DA. Avenida de Montalban
Centro Uslar, Piso 16
Urbanizacion Montalban
La Vega
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VIRGIN ISLANDS

St. Thomas

Paul Hoffman '63
P. O. Box 870 00804
(809) 774-2266

WEST GERMANY

Berlin

Julian Herrey '56
Drygalskistrasse 4B
(030) 8247733

Bochum

Edwin A. Hopkins '56
Mercatorstr 11
234 700 5042

Hamburg

Friedrich K. Goerner '40
7 Nonnenstieg
(040) 45 25 20

Statistical Information for 1988-89



In 1864 Shimeta Neesima left Japan as a stowaway on the clipper ship *Wild Rover* for America and sold his samurai sword for a Chinese New Testament. He was adopted by the shipowner, an Andover trustee, was christened Joseph Hardy Neesima, graduated from Andover in 1867, later from Amherst and the Andover Theological Seminary, and became the first Japanese to be ordained a Congregationalist minister. Neesima returned to Japan to found The Doshisha, a great university in Kyoto dedicated to Japanese and Christian ideals. Doshisha recently celebrated its 101st birthday.

Geographical Distribution*

U.S.V.I. & P.R.	1
Massachusetts	440
Rhode Island	7
New Hampshire	42
Maine	20
Vermont	14
Connecticut	62
New Jersey	33
New York	144
Pennsylvania	23
Delaware	2
District of Columbia	13
Maryland	24
Virginia	19
West Virginia	6
North Carolina	15
South Carolina	7
Georgia	7
Florida	18
Alabama	1
Tennessee	5
Mississippi	3
Kentucky	5
Ohio	14
Indiana	5
Michigan	14
Iowa	4
Wisconsin	3
Minnesota	3
South Dakota	0
North Dakota	0
Montana	3
Illinois	27
Missouri	2
Kansas	1
Nebraska	0
Louisiana	1
Arkansas	2
Oklahoma	4
Texas	19
Colorado	7
Wyoming	4
Idaho	1
Utah	0
Arizona	8
New Mexico	1
Nevada	0
California	66
Hawaii	2
Pacific Islands	0
Oregon	6
Washington	6
Alaska	1
Total U.S.	1115

*Based on place of current residence,
not citizenship.

Bahamas	1
Botswana	1
Canada	4
Republic of China	1
People's Republic of China	7
Dominican Republic	1
Egypt	1
Finland	1
France	10
Germany	5
Great Britain	7
Greece	2
Hong Kong	7
India	3
Italy	2
Ivory Coast	1
Japan	2
Jordan	1
Korea	1
Mexico	2
Nigeria	1
Panama	1
Philippines	1
St. Lucia	1
Saudi Arabia	7
Senegal	1
Singapore	1
South Africa	2
Spain	10
Sudan	1
Sweden	1
Switzerland	2
Syria	1
Thailand	1
Tunisia	1
Turkey	1
USSR	10
United Arab Emirates	2
Zimbabwe	1
Total Foreign	108
Total U.S.	1115
SCHOOL TOTAL	1223

	Girls	Boys	Total
Seniors	186	229	415
Uppers	171	165	336
Lower	138	166	304
Juniors	83	85	168
	578	645	1223
Total Boarding Students			951
Total Day Students			272
TOTAL			1223

College Matriculations for the Class of 1988

The Class of 1988 applied to 180 different colleges and matriculated at 99 colleges and universities.

College	Admitted	Matriculated	College	Admitted	Matriculated	College	Admitted	Matriculated
American U.	5	2	Harvard	33	23	Smith	5	2
Babson	5	1	Haverford	7	1	Stanford	11	7
Bard	2	1	Hobart	2	2	Swarthmore	4	1
Barnard	19	6	Holy Cross	5	1	Syracuse	17	2
Bates	10	3	Kenyon	5	2	Trinity, CT	36	11
Boston College	12	4	Knox	1	1	Trinity U.	5	2
Boston U.	18	4	Lafayette	6	1	Tufts	20	6
Bowdoin	6	4	Lehigh	8	1	Union	9	1
Brandeis	5	1	Macalester	8	3	USAF Academy	1	1
Brown	49	30	U. Maryland	2	1	U. S. Naval Academy	1	1
Bryn Mawr	6	1	MIT	8	6	Vanderbilt	7	3
U. of California			U. of Massachussetts	12	2	Vassar	14	4
Berkeley	34	14	McGill/Canada	8	3	U. of Vermont	11	5
Carleton	8	2	U. of Michigan	23	5	Villanova	4	2
Carnegie Mellon	4	1	Middlebury	14	6	U. of Virginia	12	5
U. Chicago	9	2	Mount Holyoke	1	1	Washington U.	7	2
Clark	7	1	U. of New Hampshire	14	3	U. of Washington	1	1
Colby	11	2	New York Univ.	9	5	Wellesley	4	2
Colgate	10	4	U. of North Carolina	8	3	Wesleyan	23	7
Colorado	4	1	Northeastern	1	1	Wheaton, MA	4	1
U. of Colorado	14	16	Northwestern	30	12	William Smith	3	1
Columbia	21	5	Notre Dame	3	1	William and Mary	8	1
Columbia SEAS.	1	1	Oberlin	22	6	Williams	5	2
Connecticut College	15	1	Oberlin Conservatory	1	1	U. of Wisconsin	11	3
Cornell	24	7	Occidental	7	2	Wooster	3	1
Dartmouth	8	4	Ohio Wesleyan	1	1	Yale	30	16
Davidson	4	1	U. of Pennsylvania	35	10			
Denison	8	3	Pitzer	3	1			
Dickinson	8	5	Pomona	8	4			
Duke	11	1	Princeton	17	11			
Earlham	3	1	Reed	4	1			
Eastman Sch. Music	1	1	RPI	5	1			
Emory	11	1	Rice	2	1			
Fordham	2	1	U. Richmond	1	1			
George			U. of Rochester	20	3			
Washington U.	7	1	St. Lawrence	9	1			
Georgetown	24	5	Skidmore	9	3			
Hamilton	14	6						

College Admissions

Admission to colleges is not based on a student's mere presence at Andover, but is based on how well the student has used this experience. All selective colleges exercise judgments relative to factors over and above academic ability in selecting a freshman class. While some of these factors relate to exceptional talents in one area or another, others are related to diversity in background and educational objectives.

The college admissions picture is entirely different and infinitely more complex now than it

was in past decades. Competition for admission to selective colleges is rigorous, and Andover students are encouraged to apply across a range of choices to colleges with varying degrees of selectivity. The one constant in all of this should be a real desire to educate oneself. To this end the College Counseling Office works with the class as a whole and with each candidate to help each one draw up a list of colleges that makes sense.

Phillips Academy seniors go to college well prepared for the academic program and social experience that lie ahead.





TRUSTEES

MELVILLE CHAPIN '36

A.B., J.D.

President

elected 1974

elected President, 1981

Cambridge, Massachusetts

DONALD W. McNEMAR

B.A., M.A., Ph.D.

Clerk

elected 1981

Andover, Massachusetts

ROBERT LIVINGSTON IRELAND III '38

A.B., LL.B.

elected 1960

Thomasville, Georgia

WILLIAM WADE BOESCHENSTEIN '44

S.B.

elected 1971

Perrysburg, Ohio

CAROL HARDIN KIMBALL '53

A.B.

elected 1974

New York, New York

RICHARD LEE GELB '41

A.B., M.B.A.

elected 1976

New York, New York

STEPHEN BRADNER BURBANK '64

A.B., J.D.

elected 1980

Philadelphia, Pennsylvania

ELIZABETH PARKER POWELL '56

B.A., M.A., M.B.A.

elected 1980

Wellesley Hills, Massachusetts

FREDERICK W. BEINECKE '62

B.A., J.D.

elected 1980

New York, New York

DAVID M. UNDERWOOD '54

B.A.

elected 1983

Houston, Texas

ALEXANDER B. TROWBRIDGE '47

B.A.

elected 1985

Washington, D.C.

JOHN D. MACOMBER '46

B.A., M.B.A.

elected 1987

New York, New York

BARBARA CORWIN TIMKEN '66

B.A.

elected 1988

New York, New York

Alumni Trustees

KATE SIDES FLATHER '59

B.A.

elected 1986 for 4 years

Concord, Massachusetts

HENRY G. HIGDON '59

B.A.

President of Alumni Council

elected 1988 for 2 years

Greenwich, Connecticut

MOLLIE LUPE LASATER '56

B.A.

elected 1988 for 4 years

Forth Worth, Texas

RICHARD J. PHELPS '46

B.A.

elected 1988 for 4 years

Hingham, Massachusetts

DONALD L. SHAPIRO '53

A.B., B.A.

Chairman of the Alumni Fund

New York, New York

GEORGE BUNDY SMITH '55

B.A., LL.B., M.A., Ph.D.

elected 1986 for 4 years

New York, New York

ROGER F. MURRAY 2nd '28

Consultant to the

Trustee Finance Committee

Wolfeboro, New Hampshire

Trustees Emeriti

PHILIP KIRKHAM ALLEN '29

A.B.

1969-1980

Andover, Massachusetts

GEORGE BUSH '42

A.B.

1967-1980

Washington, D.C.

JOHN LEWIS COOPER '31

A.B.

1968-1981

Dover, Massachusetts

CHARLES STAFFORD GAGE '21

A.B., A.M.

1952-1976 (Treasurer 1966-1976)

New Haven, Connecticut

CHARLES APPLETON MEYER '35

A.B.

1969-1988 (Treasurer 1976-1988)

Lake Forest, Illinois

JOHN USHER MONRO '30

A.B.

1958-1983

Jackson, Mississippi

GERARD PIEL '33

A.B., D.Sc., Litt. D., L.H.D., LL.D.

1969-1985

New York, New York

HEADMASTER'S OFFICE

DONALD WILLIAM McNEMAR

Headmaster

B.A., M.A., Ph.D.

PETER QUACKENBUSH MCKEE

Associate Headmaster

A.B., Ed.M.

JANE H. MUNROE

Executive Secretary to the Headmaster

OFFICE OF THE DEAN OF FACULTY

K. KELLY WISE

Dean of Faculty

A.B., M.A.

LYNDA DIAMONDIS

Secretary to the Dean of Faculty

OFFICE OF THE DEAN OF STUDIES

FRANK McCORD ECCLES

Dean of Studies

B.S.M.E., M.A.

HERBERT HARRY MORTON, III

Registrar

A.B.

STEPHEN D. CARTER

Scheduling Officer, Associate Dean of Studies

Sc.B., M.A.L.S.

ROSEMARIE ARMSTRONG

Recorder

B.S.

DEANS OF THE RESIDENTIAL CLUSTERS

JONATHAN STABLEFORD

Dean of Residence

B.A., M.A.T.

REBECCA M. SYKES

Abbot Cluster

A.B., M.S.W.

PAMELA BROWN

Pine Knoll Cluster

L.D., B.A., M.Ed.

HELMUTH W. JOEL, JR.

Rabbit Pond Cluster

B.A., M.A., Ph.D.

JOHN A. GOULD

West Quadrangle South Cluster

A.B., M.A.

VICTOR W. HENNINGSSEN, III

Flagstaff Cluster

B.A., A.M., Ed.M., Ed.D

DAVID B. POTTLE

West Quadrangle North Cluster

B.A., Ph.D.

CARROLL WESLEY BAILEY

Director of Residential Affairs

A.B., J.D.

PRISCILLA K. BONNEY-SMITH

Associate Dean

B.A., M.A.T., M.A.

OFFICE OF THE DIRECTOR OF ATHLETICS

PAUL KALKSTEIN

Director of Athletics

A.B., M.A.T.

KATHERINE A. HENDERSON

Assistant Director

B.S., M.A.

BUSINESS OFFICE

NEIL H. CULLEN

Chief Financial Officer

B.A., M.A., Ph.D.

SUSAN GARTH STOTT

Director of Personnel and Business Services

B.A., M.C.R.P.

DONALD H. BADE

Comptroller

B.B.A.

JUDITH A. HAUPIN

Associate Comptroller

B.S.

OFFICE OF ADMISSION AND FINANCIAL AID

JEANNIE FORD DISSETTE

Dean of Admission

A.B., M.A.

REBECCA CARR

Asst. Dean of Admission

B.A.

ELIZABETH BRUNS EATON

Admission Officer

B.A.

CLEMENT MORELL

Director of Financial Aid

B.A., M.S.

PETER L. DRENCH

Asst. Dean of Admission

B.A., M.A.

ROBERT A. EDWARDS

Asst. Dean of Admission

B.A.

D. SCOTT LOONEY

Admission Officer

B.A.



FACULTY 1987-88

The date following the name indicates the year the instructor joined the Andover faculty. This reflects the faculty for the 1987-88 school year.

J. ELAINE ADAMS (1982)
Instructor in Physics and Astronomy (on leave)
B.S. Gordon; Ph.D. Northeastern

IRENE AGUERO (1987)
Instructor in Spanish
B.S. Northeastern University

MAX ALOVISETTI (1986)
Psychological Counselor, Instructor in Psychology
B.A., M.A. City College of NY; Ph.D. University of RI

JEANNE E. AMSTER (1979)
Dean of Studies (on leave)
Instructor in History and the Social Sciences
A.B. Mt. Holyoke; M.A. Stanford

CHARLES EMORY APGAR, III (1969)
Instructor in Physics
A.B. Earlham; M.A.T. Brown

JORGE ARTETA (1986)
Instructor in Spanish
B.A. Tufts

VINCENT B.J. AVERY (1976)
Instructor in Religion and Philosophy
S.T.L. Gregorian; S.T.D. Academia
Alphonsiana, Rome

JOHN E. BACHMAN (1987)
Director of Foundation and Corporate Support
A.B. Johns Hopkins, M.A. Wesleyan, Ph.D. American University

DONALD H. BADE (1975)
Comptroller
B.B.A. University of Wisconsin

KARL BADEN (1986)
Instructor in Photography, Director of Audio Visual Gallery
M.F.A. Univ. of Illinois;
B.A. Syracuse University

CARROLL WESLEY BAILEY (1970)
Director of Residential Affairs, Instructor in English on the Frederick W. Beinecke Teaching Foundation
A.B., J.D. University of Pittsburgh

LESLIE BALLARD (1973)
Chair Department of Chemistry, Instructor in Chemistry and Biology
B.A. Sarah Lawrence; M.A.T. Harvard

SETH B. BARDO (1981)
Instructor in English
B.A. Yale; M.A.T. Harvard

DONALD THOMPSON BARRY (1980)
Instructor in Mathematics
B.A. Carleton; M.Div. Yale

YOLANDE BAYARD (1973)
Instructor in French
B.S., M.A. Central Connecticut State College

AUDREY NYE BENSLEY (AA 1965)
Instructor in Art

GORDON GILMORE BENSLEY (1949)
Chair Department of Art
Instructor in Art on the Ammi Wright Lancashire Foundation
A.B. Yale

LOUIS M. BERNIERI (1977)
Chair Department of English
Instructor in English on the John H. Porter, Jr. Bicentennial Instructorship
A.B. Harvard; M.A. Middlebury

GEORGE WILLIAM BEST (1958)
Instructor in Mathematics on the John Mason Kemper Foundation
B.S. Union College; M.A. Boston University

CARL BEWIG (1986)
Director of College Counseling
B.A. Oberlin College; M.A.Ed. Washington University (St. Louis)

LILING BIAN (1987)
Visiting Chinese Instructor
Tsitsihar Teachers' College

KATHRYN A. BIRECKI (1984)
Athletic Trainer
B.S. Central Connecticut State University

JENNIFER BOND (1985)
Instructor in Physics and Astronomy
B.A. Wellesley

PRISCILLA KEENE BONNEY-SMITH (1974)
Associate Dean
A.B. Bates; M.A.T. Brown;
M.A. Lesley College

JOANNE Y. BORLAND (1984)
School Physician
A.B. Bryn Mawr; M.D. Harvard

NANCY W. BOUTILIER (1984)
Instructor in English
A.B. Harvard

CAROLE BRAVERMAN (1979)
Instructor in English
B.A. Brooklyn, M.A. Purdue

- CAROLYN B. BRECHER (1974)
Instructor in Modern Dance, Assistant in Audio-Visual
A.B. Bard
- NANCY B. BROTHER (1981)
Director of Academic Counseling Program
B.S. University of Nebraska; Ed.M. University of Lowell
- MICHAEL BROWN (1986)
Technical Director Theater Department
- PAMELA BROWN (1980)
Dean of Pine Knoll Cluster, Educational-Director of Computer Literacy Center
B.A. Penn State; M.Ed. Boston College; L.D. Certificate Curry College
- JAMES LEIGHTON BUNNELL (1967)
Instructor in History and the Social Sciences
A.B. University of the South;
A.M. Vanderbilt
- J. FLETCHER CARR (1987)
Assistant Director of Annual Fund
B.A. Williams
- REBECCA CARR (1986)
Asst. Dean of Admission
B.A. Mount Holyoke College
- ADELA CARTER (1986)
House Counselor
A.B. Brown; M.L.S. University of Rhode Island
- STEPHEN DOUGLAS CARTER (1980)
Scheduling Officer, Associate Dean of Studies, Instructor in Mathematics
Sc.B Brown; M.A.L.S. Wesleyan
- DOUGLAS P. CHAMBERLIN (1986)
Director of Computing
B.A. Plymouth State College
- JOHN PATTEN CHIVERS (1960)
Instructor in German
A.B. Wesleyan; A.M. Middlebury
- ANDREW J. CLINE (1979)
Instructor in Mathematics
B.A. College of Wooster; M.A.L.S. Wesleyan
- DAVID OWEN COBB (1968)
Instructor in English on the Elizabeth Milbank Anderson Foundation
A.B. University of Maine; A.M. Middlebury
- THOMAS EDWARD CONE, III (1966)
Instructor in Biology
B.S. Trinity; M.A.T. Brown
- CATHERINE A. CONSIGLIO (1987)
Instructor in Music
B.M. Wichita State Univ.; M.M. New England Conservatory
- CHRISTOPHER CAPEN COOK (1964)
Director of the Addison Gallery of American Art on Kemper Directorship Foundation, Instructor in Art
A.B. Wesleyan; M.F.A. University of Illinois
- JENIFER M. COOKE (1983)
Director of Alumni & Development Information Systems
B.A. Dartmouth
- ALBERT COONS (1979)
Instructor in Mathematics
B.A. Johns Hopkins
- DOUGLAS EVERETT CRABTREE (1971)
Chair Department of Mathematics, Instructor in Mathematics on the Jonathan French Foundation
A.B. Bowdoin; M.A. Harvard; Ph.D. University of North Carolina
- BRUCE M. CRAWFORD (1980)
Director of Physical Plant
B.S., M.M.S. Lowell Tech
- ROBERT LEE CRAWFORD (1971)
Instructor in History and the Social Sciences
B.A. Northwestern; S.T.B. The General Theological Seminary; M.A. University of Pennsylvania
- ELIZABETH W. CULLEN (1987)
Director of Parent Fund
B.A. University of Rochester
M.A. Cornell
- NEIL H. CULLEN (1986)
Chief Financial Officer
B.A. U. of Rochester; M.A. Cornell; Ph.D. Michigan State U
- GRACE E. CURLEY (1986)
Director of Planned Giving
A.B. Brown
- MARGARITA CURTIS (1986)
Chair Department of Spanish, Instructor in Spanish
B.A. Tulane; B.S. Mankato State Univ.; M.S. Harvard University
- KATHLEEN MARY DALTON (1980)
Instructor in History and the Social Sciences
B.A. Mills; M.A., Ph.D. Johns Hopkins
- LINDA DEMMERS (1986)
Director of Oliver Wendell Holmes Library
A.B. Vassar College; M.L.S. Simmons College Graduate School
- JEANNIE FORD DISSETTE (1985)
Dean of Admission on the Joshua Lewis Miner, III Deanship of Admission Foundation
B.A., M.A. University of Pennsylvania
- GEORGE MACNAMARA DIX (1972)
Instructor in Modern Languages
A.B. Brown; A.M. Middlebury
- JULIANN DOYKOS (1986)
Director of Membership and Public Relations for the Addison Gallery
B.A. Mount Holyoke
- PETER L. DRENCH (1987)
Asst. Dean of Admission, Instructor in History and the Social Sciences
B.A. Cornell Univ.; M.A. Tufts University
- TANYA DRENCH (1987)
House Counselor
B.S. Simmons; M.A. Lesley
- PAULA F. DREWNIAKY (1981)
Instructor in Mathematics
A.B. Smith; MALS Dartmouth
- MARY RIMER DUKE (1987)
Instructor in French
B.A. Oberlin; M.A. Middlebury
- ELIZABETH B. EATON (1987)
Admission Officer
B.A. Brown University
- FRANK MCCORD ECCLES (1956)
Dean of Studies, Instructor in Mathematics on the Independence Teaching Foundation Endowment, Co-Director of Andover Dartmouth Teachers Institute
B.S.M.E. Princeton; M.A. Harvard
- HELEN M. ECCLES (1975)
Co-House Counselor, Co-Director of Andover Dartmouth Teachers Institute
A.B. Bryn Mawr
- GEORGE HOWARD EDMONDS (1961)
Co-House Counselor
A.B. Amherst; Ed.M. Harvard
- PATRICIA HOPE EDMONDS (1974)
Director of Capital Development
A.B. Mount Holyoke; M.A.T. Radcliffe
- ROBERT EDWARDS (1986)
Asst. Dean of Admission
B.A. Howard University
- ADA M. FAN (1983)
Instructor in English
B.A. Harvard-Radcliffe; M.S. Boston University; M.A. University of Rochester
- SUSAN FAXON (1986)
Curator of Addison Gallery
B.A. Smith College; M.S. Columbia School of Architecture
- MARION FINBURY (AA 1969)
Associate Director of College Counseling
A.B. Vassar

- EVERETT GENDLER (1977)
Jewish Chaplain, Instructor in Religion and Philosophy
B.A. University of Chicago; M.H.L. Jewish Theological Seminary
- EDWARD B. GERMAIN (1979)
Instructor in English
B.A. M.A., Ph.D. University of Michigan
- PETER ADDLEY GILBERT (1984)
Instructor in English, Editor of Andover Bulletin
A.B. Dartmouth; J.D. Georgetown University Law; M.A. University of Virginia
- LYDIA BUTLER GOETZE (1980)
Chair Department of Biology, Instructor in Biology
A.B. Radcliffe; M.A.T. Johns Hopkins
- JOHN ALLEN GOULD (1982)
Dean of West Quadrangle South Cluster, Instructor in English
B.A. Williams; M.A. Indiana University
- MARY FULTON GRAHAM (1985)
Instructor in English
B.A. Mount Holyoke; M.A. University of Virginia; Ph.D. University of New Hampshire
- RICHARD K. GROSS, S.J. (1981)
Roman Catholic Priest, Instructor in History and the Social Sciences and Religion and Philosophy, Co-Director of Community Service Program
A.B. Boston College; M.A. London School of Economics; M.Div. Weston School of Theology
- CHRISTOPHER JUDE GURRY (1974)
Instructor in History and the Social Sciences
A.B. Harvard; M.A. Tufts
- WOODRUFF WENDELL HALSEY, II (1986)
Executive Director of School Year Abroad
A.B. Princeton; M.A. Middlebury
- THOMAS ROBERT HAMILTON (1969)
Instructor in Biology
B.S. Tusculum College; M.S. University of Pennsylvania; M.A.T. Brown
- FRANK LEE HANNAH (1968)
Instructor in Mathematics
A.B., A.M. Dartmouth
- JUDITH ANN HAUPIN (1985)
Associate Comptroller
B.A. SUNY at Albany
- BARBARA E. HAWKES (AA 1972)
Instructor in Biology
A.B. Tufts; M.A. Northeastern
- KEVIN P. HEELAN (1983)
Chair Department of Theater, Instructor in Theater
B.A. St. Mary's College of Maryland; M.F.A. Smith
- KATHERINE ANNE HENDERSON (1984)
Assistant Director of Athletics
B.S. State University of New York; M.A. University of New Hampshire
- GARY HENDRICKSON (1986)
Graham House Counselor
B.A. Merrimack College
- VICTOR WILLIAM HENNINGSSEN, III (1974-79, 1985)
Dean of Flagstaff Cluster, Instructor in History and the Social Sciences
B.A. Yale; A.M. Stanford; Ed.M. Harvard; Ed.D. Harvard
- HENRY LYNN HERBST (1972)
Instructor in French
A.B. Hamilton; A.M. University of Pennsylvania
- SALLY CHAMPLIN HERBST (1974)
Instructor in French
A.B. Mount Holyoke; M.A. Tufts
- ALOYSIUS JOHN HOBAUSZ (1968)
Director of the Audio-Visual Center
S.B. Puskas Telecommunication Institute, Budapest
- THOMAS SALKALD HODGSON (1977)
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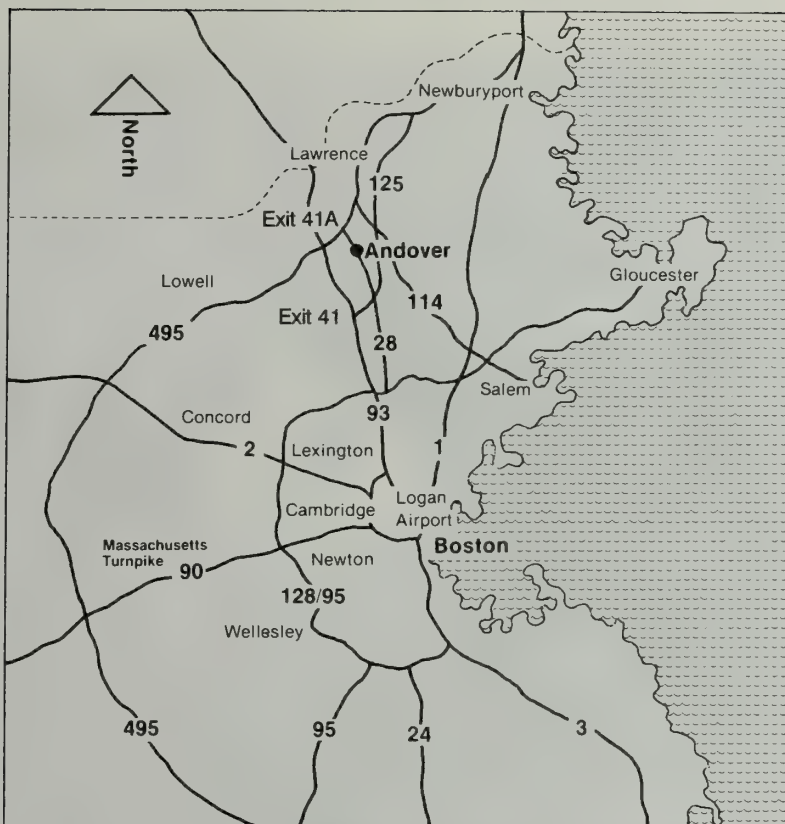
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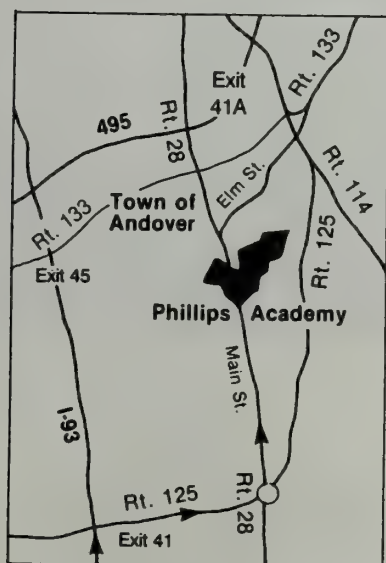
TRAVELING TO ANDOVER

If traveling by car from Boston, take Route 93 north for about 19 miles. Take Exit 41, then turn right (east) on Route 125 for 2 miles. Turn right onto Route 28 and go north about 4 miles to the Andover campus. Turn right at the Bell Tower on the corner of Route 28 and Salem Street. The Admission Office is the first building on the right.

If driving from Logan Airport, follow the signs to Boston via the Sumner Tunnel and follow Route 93 north signs.

From Route 495 north or south take Exit 41A marked Andover and proceed south on Route 28 through the town of Andover. The Phillips Academy campus is approximately one mile south of the Andover center. Turn left on Salem Street, by the Bell Tower.

Merrimack Transportation Co. runs buses to Andover from the Transportation Building in Park Square, Boston. Visitors should call the bus terminal at (617)* 686-2777 for up-to-date information.



Inns and Motels in the Area

Andover Inn
Chapel Avenue
Andover
(617)* 475-5903

Hampton Inn
Rte. 114
Lawrence
(617)* 975-4050

Koala Inn
River Road
Andover
(617)* 685-6200

Marriott Hotel
123 Old River Rd.
Exit 45
Andover
(617)* 975-3600

Lowell Hilton
Lowell
(617)* 452-1200

Sheraton Rolling Green Motor
Inn
Lowell Street
Andover
(617)* 475-5400

Hedricks' Bed and Breakfast
(617)* 475-3698

**Note: as of 7/88, area code will change from (617) to (508)*



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The material in this catalog is intended to provide general information concerning Phillips Academy, Andover, rather than a complete record of any one year. It is not in any manner contractually binding, and the information herein is subject to revision and change.

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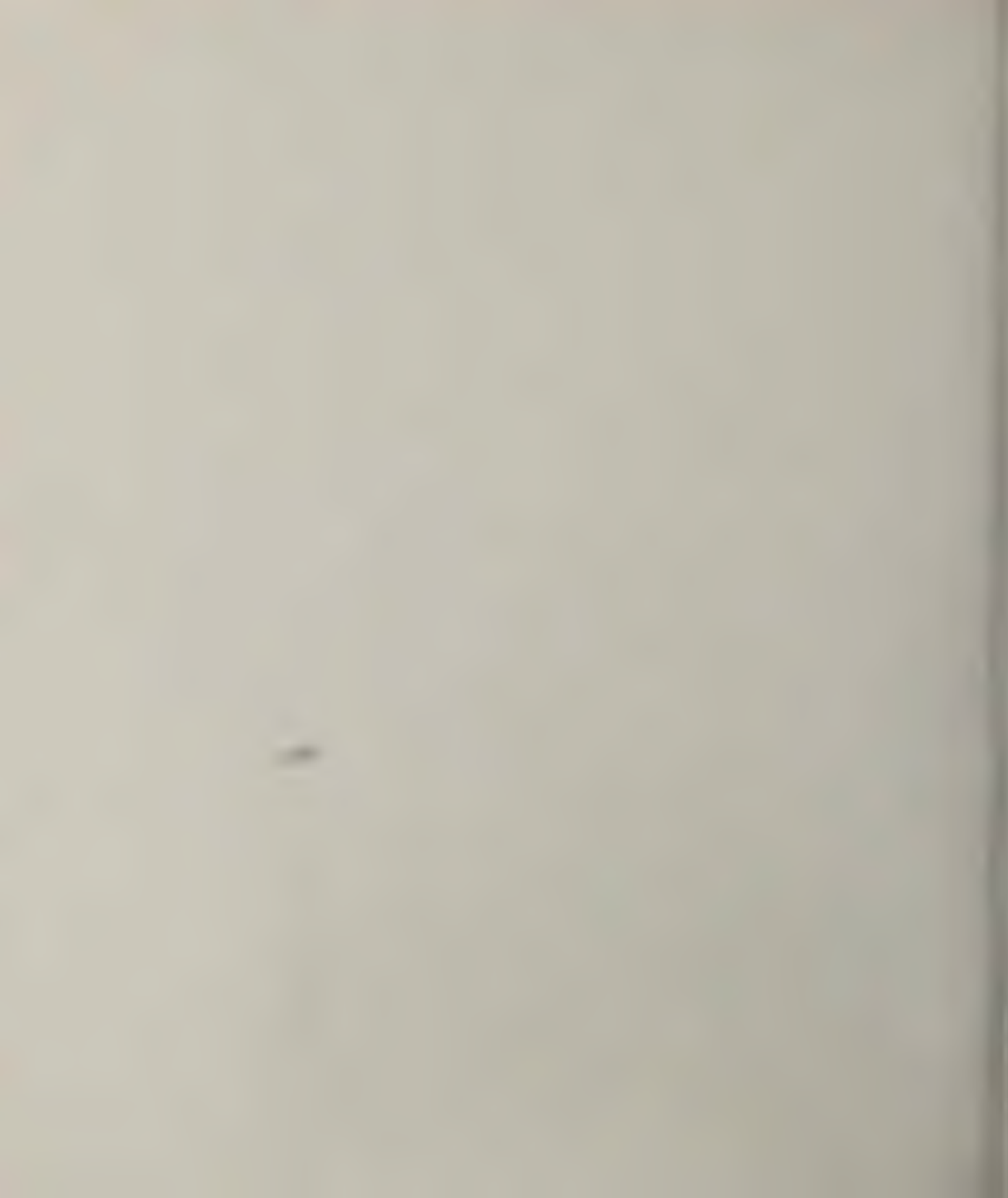
Katrina Thomas



Phillips Academy, Andover, Massachusetts 01810

**1990-91
Andover
Course of Study**

Phillips Academy



Course of Study

1990-91

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Course of Study

The curriculum of Phillips Academy comprises a required core of studies believed to be fundamental to a liberal education and elective courses designed to fit the special needs and interests of the individual student. Placement in the year-level of a subject may be independent of a student's grade-level in school; through advanced placement at entrance or accelerated courses, many students fulfill requirements ahead of the normal year, thereby gaining increased opportunity for college-level or other elective courses. Instruction is given in all subjects usually required for entrance to higher institutions.

Classroom groups are small enough to permit individual attention, and students are placed in sections fitted to their skill level. Accelerated sequences and advanced courses offer particularly able and well-prepared students opportunity to progress at a rate commensurate with their ability and ambition. Most departments offer courses beyond the level of preparation for college.

For full membership in a given class, students should have credit for the work of the previous classes or its equivalent. However, students are rated as members of a given class if their deficiencies for full membership in it do not exceed a certain number of trimester courses.

Every student is assigned to an Academic Advisor, who helps in the selection of courses that will meet Andover's diploma requirements, college entrance requirements, and the student's particular interests. Students should familiarize themselves with the Academy's basic curriculum—both its requirements and its flexibility.

Members of the Upper Middle and Senior classes should become aware of the entrance requirements of the colleges they may wish to enter.

The Trimester Plan

The academic year is separated into three trimesters. There are two types of weekly class schedules: one during which classes meet only Monday through Friday, and the other during which classes also meet on Saturday morning. Within a given week classes are scheduled to meet according to varying patterns: some for four forty-five minute periods; others for five such periods; and a few seminar and studio courses for two double-period blocks. Many departments offer yearlong courses as well as those which are term-contained (completed in one trimester). The diploma requirements are stated in terms of full-year courses or trimester courses, depending on the academic area involved.

Special courses in Foreign Languages

Special courses covering the work of two years in one are open to qualified Seniors in Chinese, German, Greek, Italian, Latin, Russian, and Spanish. These 10-20 courses are designed primarily for students of proven linguistic ability wishing to begin a second or third language in their Senior year, and therefore are not recommended for students of limited language ability. Entering Seniors with no previous foreign language experience must pass a 10-20 course as a diploma requirement.

Accelerated Sequences and Advanced Placement

The Andover curriculum offers accelerated sequences in most departments. It provides special programs in the modern foreign languages, designed to cover four years' work in three—or five years' work in four. The programs are open, on invitation of the departments, to especially able and ambitious students.

A large number of Phillips Academy students take College Board Advanced Placement Tests in May to establish advanced placement in college courses or credit toward the college degree.

Advanced Placement Examinations are offered in: American History, Art History, Art Studio, Biology, Chemistry, Computer Science (A & AB), Economics, English Language and Literature, European

History, French Language & Literature, German, Government & Politics, Latin, Math (AB & BC), Music Listening and Theory, Physics (B & C), Spanish Language & Literature.

Independent Projects

A Senior whose academic record satisfies specified criteria may apply for an Independent Project in lieu of a course. Granting an Independent Project requires the availability of a faculty mentor to supervise the project, a favorable evaluation of the merits of the proposal, and final decision by the Dean of Studies. At the conclusion of the project, the student receives a grade of Honors, Pass, or Fail.

Off-Campus Programs and Projects

The school offers several off-campus residential programs and opportunities. *Participation in any of these requires the prior permission and approval of the Dean of Studies.*

The Washington Intern Program, in which Andover joins with Exeter, allows a group of Upper Middlers and Seniors to spend the Spring Term living together in Washington and working in the offices of U. S. Senators and Congressmen. (See the History section.)

The Mountain School Program of Milton Academy is a trimester-long program for eleventh graders which offers students the opportunity to enjoy a different living and learning experience on a 300 acre farm in Vermont. Phillips Academy students may participate Fall Term only. Students will continue their academic courses in addition to activities which will emphasize practical skills and crafts. Students will work on The Mountain School farm which supplies most of the food and heat for the school.

Uppers may also participate in The Maine Coast Semester during the fall. Students continue their academic courses, but engage in physical work and challenges, and study coastal ecology, within the small school community during afternoon hours.

Selected students enrolled in Spanish at the third level or higher may elect a residential Spring Term of

study in Mexico, or a Winter Term in Barcelona, Spain, as part of an exchange program.

Selected students of French may participate in a Fall Term exchange in Paris, France, or may spend the Winter Term in Antibes, France, attending local schools and living with a family in the city.

There are also opportunities for students to spend a term living and studying in Germany, Italy, Peoples Republic of China, Ivory Coast, or the Soviet Union.

In addition to school-sponsored programs, the trimester plan provides an opportunity for individual Seniors to arrange off-campus projects related to their special interests. Development of such projects depends upon individual initiative in the investigation of opportunities and careful planning of a course of study that will meet diploma requirements and also free a block of time during the appropriate term. Participation in any off-campus project or program must be approved by the Dean of Studies.

School Year Abroad

Students may elect to spend their Upper Middle or Senior Year studying in France or Spain with *School Year Abroad*, originated as an off-campus program by Andover, later joined as a sponsor by Exeter and St. Paul's. Students live with host families, while pursuing a course of study under the supervision of teachers from the three original sponsoring schools. Although *School Year Abroad* is now an independent program, it provides students with courses that earn full academic credit at Andover and with the experience of immersion in a foreign culture. Students wishing to participate should consult their Academic Advisor or the Dean of Studies for guidance in the selection of courses for the years prior to and following the year abroad.

Summer Session

The Andover Summer Session is a six-week academic enrichment program for boys and girls of high school age. Students who wish to receive Phillips Academy credit for courses taken at the Andover Summer Session must receive prior approval from the chairman of the department involved.

Planning A Program of Studies at Andover

The following is designed to help Andover students and their parents to understand the curriculum, and to show the major decisions, and their consequences, which face students at each stage of the four-year academic program.

Workload

Students are normally expected to carry five courses each term. Uppers or Seniors who face an unusually demanding term are occasionally advised to cut back to four courses. Over the span of their last two years, students are required to complete at least 27 trimester units.

In most courses, especially those taken to meet diploma requirements, class time and homework together can be expected to require a total of about 9 hours per week. Certain upper-level elective courses, as noted in their descriptions, may require more than the standard 4 to 5 hours of homework per week.

Academic Advising

Each student has an Academic Advisor; this member of the faculty is expected to guide the student in shaping a well thought-out, long-term academic program which will incorporate both breadth and depth. In planning a program of studies, the student's needs and aspirations — insofar as they can be identified — are carefully considered, in addition to the necessity of meeting all of the diploma requirements. These needs may include college and career plans, strengths and weaknesses as revealed by previous performance and aptitude tests, and character and personal development.

The Advisor meets with the new student during the Orientation prior to the opening of school in Sep-

tember to review and approve the course selections which the student has made during the summer or spring. Subsequently the student meets with his or her Advisor midway through each term to make or confirm course selections for the upcoming term and to review long-term plans.

In addition to the Academic Advisor, the House Counselor or Day Student Counselor must also approve the student's course selection for each trimester. From time to time during the academic year, the Counselor will report to parents concerning the student's growth and progress. Late in the spring students in the three lower classes and their respective Academic Advisors will prepare a selection of courses for the coming year; a copy of this selection will be mailed to parents in June. The Academic Advisor will welcome any information and suggestions that parents may wish to offer.

Diploma Requirements

The basic diploma requirement is the satisfactory completion of a four-year secondary school program, of which at least three trimesters must be at Andover; the student must be in good standing (not on Probation or under Suspension) at the time of graduation. A student who has been dismissed is ineligible for a diploma unless readmitted.

A student's required program normally includes nine trimester credits in a foreign language, eight in mathematics, three trimester credits in United States History, plus an additional trimester course in history taken at the Upper Middle or Senior level, a full-year course in a laboratory science, plus an additional three trimesters of science, one trimester of art (usually *Visual Studies - Art 10*), one trimester of music (usually *The Nature of Music - Music 20*), and nine of English — these to include *English 100* (for ALL entering Juniors), a yearlong course of competence in writing and reading and a three-trimester sequence of general literature. In order to be eligible for a diploma all students must satisfy the swim requirement of the Department of Athletics. Certain diploma requirements vary with the class level at which the student enters Phillips Academy. Entering Juniors

and Lower Middlers must pass *Physical Education 10* in addition to required athletics; all three and four-year students must pass, prior to graduation, a one-trimester course offered by the Department of Philosophy and Religious Studies. Entering Upper Middlers need pass only one trimester of either art or music at the Academy. Some modifications of the language requirement are made for entering Upper Middlers and Seniors. Entering Seniors with no previous foreign language experience must pass a 10-20 course in a foreign language. A Senior must earn a minimum of twelve graded trimester credits during the Senior year. Seniors must have passing trimester grades for all courses taken during their Spring Trimester. Independent Projects are counted as graded courses.

Credits (trimester) required for the diploma are:

For Entering Juniors 54

For Entering Lowers 51

For Entering Uppers 48

For Entering Seniors 48

Newly Admitted Students

Students entering for their first year are sent placement material, including some forms for present teachers to complete and a self-administered diagnostic test in elementary algebra. These items are used by the Academy to aid in proper placement or recommendation of course levels. New students are also asked to complete to the best of their ability a Course Selection form, indicating the courses that they wish to take during the coming year. Although the placement material may alter somewhat a student's preliminary selections, it is helpful, for planning purposes, to know the levels that each student thinks he or she is ready to enter.

The Main Choices at Each Stage of a Four-Year Program

While a student's program of studies is adapted each year to his changing situation, the future consequences of each course should be noted, for certain choices

in one year open the way to later options and may close the door to others.

Academic Program Guidelines

In order to promote both breadth and depth in students' academic programs, the Faculty has voted the following guidelines, which are in addition to the Diploma Requirements listed above. These represent what the Faculty *strongly urges* students to do. The Academic Advisors recognize that there will always be some acceptable student programs which do not follow these guidelines.

All students, including Seniors, normally carry five courses each term, but students who take at least three courses which have been designated 'advanced' or honors courses may carry a four-course program.

All Juniors and Lowers should take English, mathematics, and foreign language every term.

By the end of Lower year each four-year student should have taken some history and some science.

By the end of Lower year each four-year student should have taken *Art 10* or *Art 11*.

All Uppers should take English all year.

In their Upper and Senior years students should take a total of at least four trimesters of mathematics and science, with at least one trimester in each of these two areas.

All Seniors should take, during each term, a course in which they do some writing in the English language.

All one-year Seniors should take one term of Art, Music, or Theatre.

All three-and four-year students will be advised to take more than the minimum diploma requirements in the arts (Art, Music, Theatre and Dance).

JUNIOR YEAR

Each trimester a Junior must take five courses. Students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the spring.

In selecting courses, students are reminded to check the diploma requirements. A Junior's program should resemble the following outline:

1. Math—enter the sequence by placement of the department;
2. Foreign Language—begin sequence (usually a yearlong course at the 10-level);
3. English—English 100
4. Elective [Art, Classics, Computer, History,
5. Elective | another Language, Music, Physical Education, RelPhil, Science, Study Skills, Theatre.

JUNIOR HUMANITIES PROGRAM:

The Human Experience

This yearlong interdisciplinary program, consisting of coordinated courses in English, history, and visual studies, will consider as central themes the human being as mythmaker and storyteller, as seeker and adventurer, as artist and civilizer. Students must take all three component courses of this program for the entire year and will receive seven academic credits. See *English 100-0*, *History 11-0*, and *Art 11-0*.

LOWER MIDDLE YEAR

Each trimester a Lower Middler must take five courses. New students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the Spring. A few students take the CEEB Achievement Tests during the Lower Middle year. In selecting courses, students are reminded to check the diploma requirements. A Lower's program should resemble the following outline:

New Students

1. Math—(usually *Mathematics 19* or *Mathematics 21*);
2. Foreign Language—enter the sequence by placement of the department;
3. English—enter sequence (*English 200*);
4. Elective [Art, Classics, Computer, History,
5. Elective | another Math, another Language, Music, Physical Education, RelPhil, Science, Study Skills, Theatre.

Returning Students

1. Math—continue sequence (*Mathematics 21, 22, 32*);
2. Foreign Language—continue the sequence;
3. English—continue sequence (*English 200*);
4. Elective [Art, Classics, Computer, History,
5. Elective | another Math, another Language, Music, Physical Education, RelPhil, Science, Study Skills, Theatre.

Students wishing to participate in the *School Year Abroad Program* during their Upper Middle or Senior year should discuss these plans with their Academic Advisor and seek guidance for the selection of courses for the Lower Middle Year. Participation in any off-campus project or program must be approved by the Dean of Studies.

UPPER MIDDLE YEAR

During the Upper Middle and the Senior Years, a student must accumulate a minimum of 27 trimester units. A Pass/Fail course may be elected as a fifth course only.

New students may have their placement adjusted as a result of the placement exam or questionnaire sent to them in the spring. Uppers should take the Preliminary Scholastic Aptitude Tests (PSAT) in the fall; all take the CEEB Scholastic Aptitude Tests in January; and many take the CEEB Achievement Tests in the June of their Upper Middle year. Some also take the CEEB Advanced Placement Tests in June of their Upper Middle Year. As a matter of general policy Academic Advisors encourage "depth" in the selection of courses for the Upper Middle Year. In selecting courses students are reminded to check the diploma requirements. An Upper's program should resemble the following outline:

New Students

1. Math—enter the sequence by placement of the department;
2. Foreign Language—enter the sequence by placement of the department;
3. English—begin sequence (*English 250*);
4. History—usually *History 30 (T2)*, *31 (The United States)*;
5. Elective [Art, Computer, History, another Math, another Language, Music, RelPhil, Science, Study Skills, Psychology, Theatre.

Returning Students

1. Math—continue the sequence (usually *Mathematics 34, 35, 36*);
2. Foreign Language—continue the sequence;
3. English—continue the sequence (*English 300, 310*);
4. History—usually *History 30 (T2)*, *31 (The United States)*;
5. Elective [Art, Computer, another English, History, another Math, another Language, Music, RelPhil, Science, Study Skills, Psychology, Theatre.

Participation in any off-campus project or program must be approved by the Dean of Studies.

SENIOR YEAR

During the Upper Middle Year and the Senior Year, a student must accumulate a minimum of 27 trimester units. A Pass/Fail course may be elected only as a fifth course; however, an Independent Project, though marked on a Pass/Fail basis, is counted as a graded course.

A Senior must *earn* a minimum of twelve graded trimester credits during the Senior Year. Seniors must have passing trimester grades for all courses taken during their Spring Trimester. Many Seniors retake the CEEB Scholastic Aptitude Tests in November and the CEEB Achievement Tests in December, and take the CEEB Advanced Placement Tests in May. In selecting courses students are reminded to check the diploma requirements. A Senior's program should resemble the following outline:

New Students

1. Math—enter the sequence by placement of the department; if the requirement is not yet satisfied enter *Mathematics 39* or *40*;
2. Foreign Language—enter the sequence by placement of the department if the requirement is not satisfied;
3. English—usually *English 350-12*;
4. Elective [Art, Computer, another English,
5. Elective [History, another Math, a 10-20 Language, Music, RelPhil, Science, Study Skills, Psychology, Theatre.

Returning Students

Usually most diploma requirements have been satisfied. Careful selection of electives for continued depth in the student's chosen areas is encouraged. Two-year students take *English 310* in the fall, and electives at the 400 and 500 level in the winter and spring.

Transferring and Dropping Courses

To transfer or drop a course, a student must obtain an official transfer slip from his or her Academic Advisor. This slip is then taken *as soon as possible* to the Scheduling Officer in Evans Hall Basement. Transfers into term-contained courses must take place during the first six calendar class days of the term. No course may be dropped after the end of the fourth week of classes of any term. Students wishing to drop yearlong or T2 courses prior to the normal end of the course, and after the first six calendar class days of the course, may do so only by gaining the approval of a group of five: the Department Chairman, the Dean of Studies, the student's House Counselor, Academic Advisor, and Instructor. Credit is granted at the discretion of the Department Chair and only if the student is passing the course at the time it is dropped and only for that portion completed. Yearlong and T2 courses are considered to be long-term commitments.

Attendance

Students are expected to attend all academic classes. Instructors, if approached in advance, are permitted (but not required) to excuse students from a class meeting if the absence from that meeting will not add to weekend time. Only Cluster Deans may give permission to extend weekend time, and they may do so without consulting Instructors.

Failed Courses

In most cases, continuing students may attempt to receive credit for a failed course by taking a make-up examination. Spring Term Senior Failures may be made up only following Commencement.

Computer Center

A computer center, located in the lower level of the Oliver Wendell Holmes Library, is available for student use. It houses two computer classrooms and a third lab filled with an array of Macintosh, Apple IIe and Zenith (IBM compatible) computers. The center is open during the regular operating hours of the li-

brary. A wide range of software is available, and instruction in computer usage is provided.

Personal Computers

Though there is no expectation that they do so, students are permitted to bring personal computers to the School and keep them in dormitory rooms (providing the monitor may not also be used as a television receiver). However, Phillips Academy can assume no responsibility for the care, security, or maintenance of these student-owned units. Further information concerning personal computers is available, upon request, from the director of the Computer Center.

College Entrance Examination Board Test Dates

Tests will be held on campus in 1990-91 as follows:

October 20	PSAT/NMSQT (<i>Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test</i>)
November 3	SAT/ACH
December 1	SAT/ACH
January 26	SAT/ACH
May 4	SAT/ACH
June 1	SAT/ACH
May 6-17	AP (<i>Advanced Placement Examinations</i>)

Course Enrollments and Cancellations

The School reserves the right to cancel, at any time up to the 3rd day of classes, any advertised course where enrollment is judged to be unacceptably small. Likewise, the School has the right to restrict enrollment in any course when sign-ups exceed the departmentally determined course capacity.

Key to Course Designation

A course number ending in "0" denotes a yearlong course (Example: *Math 10-0*). A number ending "123" indicates that the course is term-contained, but sequential, and may be taken for one, two, or three terms (Example: *Art 26-123*). A number ending in a single digit "1", "2", or "3" indicates a course that is term-contained, but one that may be taken only once (Example: *Music 20-2*). The designations 1, 2, and 3 indicate the trimester during which the course is offered: 1 = Fall; 2 = Winter; 3 = Spring. Some courses require a two-term commitment; they are indicated by a "(T2)" following the course name (Example: *Physics 52-12 Advanced Placement Physics (T2)*). Check carefully each course description for any other limitations: Prerequisites, permission of instructor or department chairman required, etc.

Immediately below each course number is a 4-digit number in parentheses. This identification number (often referred to as the "computer number") is used for data-processing files and is required when a student registers for courses. The final digit of the computer number has roughly the same meaning as the last digit of the course number:

Final Digit: Indicates:

- 0 Yearlong course
- 1 Course offered in Fall Trimester
- 2 Course offered in Winter Trimester
- 3 Course offered in Spring Trimester
- 4 T2 course offered in Fall and Winter
- 5 T2 course offered in Winter and Spring

Course Descriptions

Art

The diploma requirement in Art is as follows: entering Juniors and Lowers must take a course in Studio Art; an entering Upper must take a trimester course in Studio Art or Music at the Academy; neither a

Pass/Fail course nor an Art History Course is accepted as fulfilling the requirement. The basic course, *Visual Studies*, covers a broad range of material, is open to students of all abilities and experience, and is a prerequisite to almost all elective courses in Art. Exemption from this **prerequisite** is granted only on the basis of a portfolio of work judged satisfactory by the Chairman of the Department in collaboration with the teacher of the course which the student desires to enter. An acceptable portfolio should contain examples of two-dimensional work, three-dimensional work (slides or photographs are acceptable), and photography.

The College Entrance Examination Board offers students the opportunity to gain Advanced Placement in Studio Art in many colleges and Art Schools, thus enabling a student to by-pass basic design courses. Students must submit a portfolio of slides and original work to Princeton in May. Students interested in Advanced Placement should enroll in *Art 315-1* and two subsequent terms in Art.

Students wishing to apply for an independent project in photography will not be eligible until they have taken *Art 12*, *Art 26*, and two terms of *Art 306*.

With the exception of *Art 40* and *41*, no Art course, if failed, can be made up by examination.

Students should expect to help pay for art materials. Cameras are available for loan to scholarship students taking photography.

INTRODUCTORY STUDIO COURSES

10—1	(0101)	Visual Studies
10—2	(0102)	
10—3	(0103)	

Five prepared class periods. Not recommended for Juniors. In its emphasis on visual observation, interpretation, and organization, the basic course is designed to provide an understanding of how visual information is made and transmitted. Along with discussion of design problems, the student receives experience in photography, drawing, two-dimensional design, and three-dimensional construction. Previous experience in art is not required.

11—0 (0110) Visual Studies for Juniors

(a yearlong commitment)

Two prepared periods (including one double period). This course is part of a Junior Humanities Program which also includes English and history, and is strongly recommended for Juniors. Students are introduced to the language of vision through drawing, photography, video, color, structure, and two- and three-dimensional design. The course will fulfill the diploma requirement in art and serve as the equivalent of *Art 10* as a prerequisite for other art courses.

11—12 (0114) Visual Studies for Juniors (T2)

11—23 (0115) (a two-term commitment)

Four prepared periods. Strongly recommended for Juniors. This course introduces students to the language of vision through drawing, photography, video, color, structure, and two- and three-dimensional design. The course will fulfill the diploma requirement in art and will serve as the equivalent of *Art 10* as a prerequisite for other art courses.

16—12 (0164) Extended Visual Studies (T2)

(a two-term commitment)

Four prepared periods. This is the recommended course for serious art students. In addition to the material covered in *Art 10*, this course includes video, art history and 3-D design, with projects in woodworking and welding. Besides fulfilling the diploma requirement, it offers an expanded foundation for students intending to continue in advanced studio courses.

12—1 (0121) Introductory Photography

12—2 (0122)

12—3 (0123)

Prerequisite: *Visual Studies (Art 10, 11 or 16)*. An introduction to basic out-of-doors photography, the course covers fundamentals of exposure, developing and print-making. A camera (35 mm. or 2 1/4) with manually controlled speed, aperture and focus is required; a light meter is not necessary. (Scholarship students may borrow cameras from the school.) Emphasis is on both dark-room technique and aesthetic quality. This course may be bypassed by students with previous experience through the presentation of a portfolio. Classes meet twice a week with six hours of preparation and weekly conferences with the teacher.

14—1 (0141) Introductory Ceramics

14—2 (0142)

14—3 (0143)

Four classes per week plus evening studios. Basic techniques of hand-building, wheel-throwing, and glazing. Emphasis on the sculptural as well as the functional possibilities of clay. At least one raku firing each term, or a similar special project. No prerequisites, and does not fulfill the diploma requirement. (Mrs. Bensley)

INTERMEDIATE STUDIO COURSES

Unless otherwise noted, the intermediate courses consist of four prepared classes each week. *Visual Studies (Art 10, 11, or 16)* is a prerequisite for all intermediate courses. Any of these courses may be taken more than once to increase proficiency, as the courses are designed to deal with individual needs.

20—1 (0201) Drawing and Two-Dimensional Design

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. A course designed to develop drawing and two-dimensional composition skills. Drawing includes: still life, and mono-printing. Two-dimensional design will deal with the organization of representational images, color, painting and collage. Continuation in *Drawing (Art 20-23)* or *Two-Dimensional Design (Art 23-23)* in Winter or Spring is recommended.

20—23 (0202) Drawing

(0203)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. A course designed to develop observation and drawing skills in several media, based on the assumption that drawing is an end in itself as well as a skill basic to other media.

23—23 (0232) Two-Dimensional Design

(0233)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. The course deals with one's ability to manipulate those elements most associated with the picture plane: color, line, shape, texture, and composition of flat materials. Work includes: 1) color—free studies and collages dealing with the structural and expressive nature of color; 2) drawing—exercises using pencil, pen, and brush, figure and landscape drawing; and 3) figure-ground—expanding the structural and illusionary aspects of figure-ground as an end in itself and as a basis for graphic and advertising design. (Mr. Shertzer)

24—23 (0245) Three-Dimensional Design (T2)

(a two-term commitment)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. This course identifies some basic areas of concern—equilibrium, economy, function, scale—within an ecological frame of reference. Studio problems in design and construction

will draw on the student's ability to learn and apply problem-solving techniques creatively; discussion and written exercises will ask the student to think about design as it defines the human enterprise. An introductory course in physics, chemistry or biology, taken previously or concurrently, will be helpful. (Mr. Lloyd)

25—1 (0251) **Artists' Books**

Prerequisite: *Visual Studies* (Art, 10, 11, or 16). Through an exploration of calligraphy or photoillustration, paper-making and bookbinding, students may turn their thoughts, feelings and dreams into book format. Initial projects will be assigned to encourage experimentation, technique and problem solving. Group critiques as well as an exploration of the historical roots of book arts and photography are integral parts of this course. (Ms. McCarthy and Mrs. Quattlebaum)

26—123 (0261) **Continuing Photography**

(0262)
(0263)

Prerequisite: Art 12. An extension of Introductory Photography, the course goes deeper into technical proficiency and aesthetic quality. Technical aspects include metering techniques, black and white filters, exposure and printing contrast controls, various developing styles and darkroom deviations. A camera and light meter are required. The student will be exposed to the works of various photographers so that he may gain a better sense of his own photographic style and identity. Classes meet twice a week with six hours of preparation and weekly conferences with the teacher.

27—13 (0271) **Animation**

(0273)

Prerequisite: *Visual Studies* (Art 10, 11, or 16). An introduction to the art of illusion of motion through shooting still images frame by frame with 8mm sound motion picture film, with emphasis on making a very concise and carefully planned statement. Students may work in computer animation. (Mr. McMurray)

HISTORY OF ART COURSES

40—1 (0401) **Art as Mythology**

Four prepared periods. For Uppers and Seniors. The Fall Term deals with the history of western painting, sculpture and architecture from pre-history to the Italian Renaissance. Although each Art History course can be taken separately, all three together should prepare students for the Advanced Placement Examination in Art History. (Mr. Bensley)

41—2 (0412) **Art as Illusion**

Four prepared periods. For Uppers and Seniors. The Winter Term starts with the Italian Renaissance and ends with the late 19th Century. During this term some time will be spent in the Addison Gallery studying original works from the collection of American Art. (Mr. Bensley)

42—3 (0423) **Art as Reality**

Four prepared periods. For Uppers and Seniors. Spring Term covers modern trends from mid-19th Century to the present. Again, some time will be spent in the Addison Gallery utilizing its contemporary collection. (Mr. Bensley)

ADVANCED STUDIO COURSES

Visual Studies (Art 10, 11, or 16) is a **prerequisite** for all advanced courses. These courses may be taken more than once. Unless otherwise noted, Advanced Studio courses meet two double periods a week with four more hours required in the studio.

300—23 (0702) **Graphics and Photography**

(0703)

Prerequisite: *Visual Studies* (Art 10, 11, or 16). Applying photography to graphic arts, particularly through photo-silkscreen, photo-etching, computer graphics, and photolithography. Individual experimentation is emphasized in an attempt to carry the expressive force of photography beyond darkroom techniques. (Mr. McMurray)

301—2 (0712) **Computer Graphics**

(Formerly Art 305-2)

Prerequisite: *Visual Studies* (Art 10, 11, or 16). This course will explore the major areas in the field of computer graphics: 2-D paint systems, 3-D graphics, and applications mixing photography, drawing, video, and print with computer-generated and/or manipulated images. One major project follows, utilizing workstations which have image digitizing capacities and can output to slides, paper or video. Programming skills are not necessary, but students with these skills will be encouraged to use them in the execution of their final project. (Ms. Veenema)

302—123 (0721) **Painting**

(0722)
(0723)

Prerequisite: *Visual Studies* (Art 10, 11 or 16) and permission of the instructor. An introduction to the basic elements and techniques of painting in oils and acrylics.

Specific problems are assigned to study the fundamentals of color, composition and space in painting, as well as to encourage the student's individual expression. Class critiques and discussions, slides, reproductions, and occasional field trips (depending on enrollment) are also part of the course. Previous experience is helpful but not necessary; students are encouraged to sign up for the full year if possible. (Mr. Cook)

303—13 (0731) Filmmaking (0733)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. This course combines viewing theatrical, documentary, and art films for discussion and criticism with the production of individual and group projects using video equipment. Course work will include developing film ideas, script-writing, shooting, editing and class critiques.

304—123 (0741) Advanced Ceramics (0742) (0743)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. For those who are seriously interested in the total operation from design to execution. Hand-building, wheel-throwing, glazemaking (and some chemical analysis), responsibility for loading and firing electric, gas, raku, and salt kilns. Assigned reading and occasional field trips. Previous experience in clay is desirable. (Mrs. Bensley)

305—3 (0753) Printmaking

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. Printmaking aims to give the student knowledge of different drawing techniques using the printmaking media such as monoprints, metal plate etching and drypoint, collagraph and plate lithography. The course allows students to see the successive conceptual stages an artist goes through in developing an image and encourages them to look at the many possible forms their images could take, in addition to focusing on one final product. (Ms. Veenema)

ADVANCED PHOTOGRAPHY

306-I—3 (0763) Photojournalism

Prerequisite: *Continuing Photography (Art 26)*. A photograph is a multi-dimensional experience. It can serve to recall persons or events; it can inform, inspire, and raise questions. It is a way of sharing an experience and one's relationship to it. The subject of this course is taking photographs that are deeply and personally felt and which, at the same time, can communicate to a wide audience. The commentary and images of several celebrated photographers will be presented for discussion. Projects will include individual photographs, essays, picture stories,

journals, biographies, etc. While independent work is expected, some assignments will be given. (Mr. Wicks)

306-II—1 (0771) The Documentary Tradition

Prerequisite: *Continuing Photography (Art 26)* and a portfolio review by the teacher. Work in documentary photography dates back to the beginning of the medium. At its best it combines the need to record, comment and preserve with the need to make an aesthetic statement. At the core of the course is the requirement to initiate and complete individual or group projects on subjects of the student's choosing. Historical documentary projects will be presented for discussion. Students considering this course should already have a fine command of camera and darkroom techniques and should be prepared to devote the extra time needed to give depth to the work. (Mr. Belcher)

308—123 (0881) Sculpture (0882) (0883)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. Offers an opportunity to work in practically every material available to the sculptor today, including wood, stone, metal, plastics, plaster, and others. It is therefore possible for students to develop into sculpture concepts discovered in *Visual Studies (Art 10)* or *Three-Dimensional Design (Art 24)* as well as ideas drawn from their own experience. Some outstanding work of recent classes includes the "avocado" by Seymour House '73, a thirty-foot welded construction which is now a permanent addition to the Underwood courtyard. Individual criticism is stressed. (Mr. Shertzer)

309—3 (0893) Kinetics

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. A search for the aesthetics of movement. Individual inventiveness is stressed as students pursue projects directed toward devices that produce implied or real motion. Self-perpetuated problem-solving situations become one of the prime values and objectives of the course. Projects range from simple mobiles and mechanical sculptures to computer graphics. (Mr. McMurray)

310—123 (0901) Architecture (0902) (0903)

Prerequisite: *Visual Studies (Art 10, 11, or 16)*. For Uppers and Seniors. *Three-Dimensional Design (Art 24)* recommended, but not required. The design of structures for human habitation involves a variety of basic considerations. In the fall, the course will concentrate on function-

al analysis of sheltered spaces and their organization. The winter term will survey methods of enclosing spaces at different scales and construction techniques, including some architectural detailing. The spring term will combine knowledge gained in the previous terms in a project or projects simulating the experience of architectural practice. The course fills the needs of students who are considering architecture as a field of concentration as well as of those who desire familiarity with the basics of environmental design. Although students are encouraged to take the course for three terms, each segment is planned to accommodate enrollment for that term alone. (Mr. Lloyd)

311—3 (0913) **Contemporary Communications**

Four prepared class periods. The course examines some of the bases of communication between and among people. Material includes fiction, non-fiction, poetry, drama, motion pictures, and the visual arts. **Prerequisites:** Successful completion of a course in art, music, or theatre. The course engages in group projects aimed at public presentation. (Mr. Owen, Mr. Lloyd)

315—1 (0951) **Advanced Placement Art**

Prerequisite: Three trimesters of art courses (including *Visual Studies*). This course is open to Seniors interested in assembling a portfolio of work for either application to college or submission to the Advanced Placement examination. Students are expected to attend weekly critique sessions designed to help them develop individual projects to pursue outside of class. Any student who plans to submit a portfolio for the Spring Advanced Placement examination should also plan to take one art course both Winter and Spring terms. (Ms. Veenema)

Classical Studies

The Department of Classics offers the following courses in Classical Studies designed to provide And-over students a broad introduction to Classical Civilization through history, literature, mythology, and etymology. All courses are electives, open to the various classes as noted. The courses offered here require no knowledge of Greek or Latin. Courses in the Greek and Latin languages offered by the Department of Classics are described under Foreign Languages. For another course in Ancient History see *History 55—123*.

21—1 (5321) **Classical Civilization: Greece**

21—3 (5323)

Four prepared class periods. For Juniors and Lower Middlers. The course surveys the achievements of the ancient Greeks from Homeric times through Alexander the Great, including their impact on later civilizations in such areas as literature, art, philosophy, drama, government and science.

22—2 (5332) **Classical Civilization: Rome**

Four prepared class periods. For Juniors and Lower Middlers. The course introduces students to the civilization of Rome which dominated the Western World politically for a thousand years and culturally for even longer. The developing concepts of politics, law, and empire as we know them today are discussed. The course challenges the students to consider the meaning of the Roman experience in its glorious achievement of the "Roman Peace" as well as in its "Decline and Fall."

31—1 (5411) **Etymology**

31—2 (5412)

31—3 (5413)

Four prepared class periods. For all classes. Training in the interpretation of English words by systematic analysis of elements derived from Greek, Latin and other Indo-European languages. Exercises expand vocabulary and develop precision of expression and understanding.

32—1 (5421) **Greek Literature**

32—2 (5422)

Four prepared class periods. Open to all classes. A systematic study of the masterpieces of early European civilization as seen in their proper literary, intellectual, and historical context. In what is essentially a history of ideas, the major *genres* of epic, tragedy, comedy, satire, history, erotic poetry, and philosophy are stressed as

aspects of the wider evolution of European thought. The major problems which still confront human life are explored through the writings of Homer, Aeschylus, Sophocles, Euripides, Herodotus, Thucydides, Aristophanes, Plato and others. (Dr. Pottle)

33—2 (5432)

Classical Mythology

33—3 (5433)

Four prepared class periods. Open to all classes. The interest of the Twentieth Century in Classical Mythology has stemmed from three main sources: the psychoanalytical use of myth, progress in the field of classical archaeology, and anthropological study of myth. Preliminary exploration of the works of Freud in psychology, Schliemann and Evans in archaeology, and Frazer, Graves, and Levi-Strauss in anthropology leads to the detailed study of the myths of Oedipus, Theseus, and Agamemnon among others. The myths are considered living entities changing in the hands of each artist who deals with them whether it be Homer or Joyce, Aeschylus or O'Neill, an anonymous Greek vase painter or Dali, Euripides or Strauss. Works of literature, art, and music provide the core for the study of the use of myth in human life. (Mr. Krumpe)

English

The diploma requirements in English are to establish competence in writing and reading. For new Lower, this requirement is fulfilled by successful completion of *English 200*, *English 300*, and *English 310*. New Uppers fulfill their requirement by successful completion of *English 250*, *English 310*, and two terms of English electives. One year Seniors must take *English 350* and one term of an English elective. (One year Seniors and post-graduates are interviewed by the Department Chair before the start of school and in some cases these students may be exempted from *English 350* to enroll in three terms of a 400 or 500 level English course.) Students entering the Junior class must take *English 100*. Juniors may not enroll in *English 200*.

The English Department also offers specialized courses for students who have already passed their requirements and elect to continue studying English. Related courses, whose prerequisites vary, are listed elsewhere in this booklet: e.g., under Performing Arts, Interdisciplinary Courses, Classics Courses, and Mod-

ern Foreign Language Courses in translation. *All English courses meet for four prepared classes a week, unless the course description states otherwise. No failed course may be made up simply by passing a make-up examination.*

100—0 (1100) **English: The Myth and the Journey**

This course is required for all Juniors. As a foundation for *English 200* and *300*, the course studies a variety of literary forms and styles. Frequent writing assignments, close reading of such texts as *The Odyssey*, *Great Expectations* or *The Once and Future King*, *Black Boy*, *The Tempest*, and regular work with journal entries prepare the student for successful completion of the English requirements. This course is part of the Junior Humanities Program.

Juniors are also eligible to enroll in Etymology, which is described under Classics.

200—0 (1200)

Competence

The course in reading and writing uses a varied selection of short works from *The Competence Handbook*, anthologies, and the students' writing as the primary texts. The first term emphasizes paragraph coherence and basic skills through the writing of short compositions, expressive and expository; the second term focuses on clear and concise multi-paragraph essays and a documented inquiry that encourages the acquisition of important reading skills in conjunction with learning to write a paper in the Humanities. The third term includes close and accurate reading of the poem, the short story, and the short novel by having students write about point of view, characterization, tone, organization, diction, theme. Throughout the year we assume that reading and writing are activities and that the teacher's function is to help the student understand and perform these activities through practice, comment, and revision. The criteria for grading are the successful completion of assignments, the degree of improvement, and the quality of the work. Designed to teach students to read as writers and write as readers, successful completion of *English 200* prepares students for the literature sequence and the specialized courses.

250—0 (1250)

Competence/Literature Sequence for Uppers

A condensed version of *English 200* and *English 300*. Required of all new Uppers. Students completing this course take *English 310-1* in the fall.

300—12 (1304)

The Seasons of Literature (T2)

(a two-term commitment)

English 300 continues *English 200's* movement toward literary analysis, developing critical skills through the

study of novels, poetry, drama, and sometimes, film. The course provides a sense of literary mode; of historical perspective; of mythic, psychological, and cultural contexts, aiming at the development of a literary sensibility. While emphasizing the analytical — both the close reading of texts and focused writing that asserts a thesis and supports its points with extensive textual evidence — the course also encourages open discussion and more experimental forms of expression, such as journals, narratives, role-plays, parodies. The structure of the course is inspired by, but not governed by Northrop Frye's cyclical scheme of literature: tragedy (fall), irony (winter), comedy (spring), romance (summer). The first term pairs tragedy and romance, while the second term pairs comedy and irony, for balance through the separate terms. *Oedipus Rex* is required reading in the first term and *The Adventures of Huckleberry Finn* in the second; other works are selected by individual instructors from departmental lists covering the pre-Romantic, Romantic/post-Romantic, and modern periods (excerpted below), so that each period is represented in each term. Additional works (not necessarily from the departmental lists) are assigned by the various instructors. Approximately one-third of the reading is devoted to poetry, and substantial attention is given to women and ethnic writers. There is a departmental exam. **Prerequisite:** *English 200*.

Tragedy and Romance — *Pre-Romantic*: Selections from the Bible (e.g. Genesis, Job, the gospels); a play by Aeschylus; *Metamorphoses*, Ovid; *Beowulf*; *Everyman*; *The Spanish Tragedy*, Kyd; *Dr. Faustus*, Marlowe; *The Changeling*, Middleton; *The White Devil*, Webster; selections from *Paradise Lost*, Milton; poems by Spenser, Jonson, Donne, Herbert, Marvell; *Phedre*, Racine; tales collected by the Grimms.

Romantic/Post-Romantic: *Rime of the Ancient Mariner*, Coleridge; *Eve of St. Agnes*, Keats; *Frankenstein*, Shelley; *Wuthering Heights*, Bronte; short stories by Poe; *The Scarlet Letter*, short stories, Hawthorne; *Billy Budd*, *Moby Dick*, Melville; a play by Ibsen; a novel by Hardy; *Daisy Miller*, James; poems by Wordsworth, Shelley, Keats, Tennyson, Whitman, Dickinson.

Modern: *Heart of Darkness*, Conrad; *House of Mirth*, Ethan Frome, Wharton; *The Fountain Overflows*, West; *The Great Gatsby*, short stories, Fitzgerald; *The Sun Also Rises*, *Farewell to Arms*, short stories, Hemingway; *The Iceman Cometh*, *Long Day's Journey into Night*, O'Neill; *The Bear*, short stories by Faulkner; *Antigone*, Anouilh; *Native Son*, Wright; *Invisible Man*, Ellison; *Seize the Day*, Bellow; *The Fixer*, Malamud; *Wise Blood*, short stories, O'Connor; *Death of a Salesman*, Miller; *The Dutchman*, Jones; *House Made of Dawn*, Momaday; *Sula*, *Song of Solomon*, Morrison; *Book of Common Prayer*, Didion; *Love Medicine*, Erdrich; poems by Yeats, Eliot, Hughes, Berryman, Lowell, Brooks; a work

by Cather, Steinbeck, Welty, McCullers, Baldwin; stories by LeGuin; plays by Fugard, August Wilson.

Comedy and Irony — *Pre-Romantic*: Works by Horace, Juvenal; selections from *Canterbury Tales*, Chaucer; *Volpone*, Jonson; poems by Donne, Herbert, Marvell; a play by Moliere; selections from Dryden, Pope; *The Country Wife*, Wycherly; *Gulliver's Travels*, "A Modest Proposal", Swift; *Candide*, Voltaire.

Romantic/Post-Romantic: *Pride and Prejudice*, Austen, *Don Juan*, Byron; *David Copperfield*, *Hard Times*, Dickens; *Moby Dick*, Melville; poems by Browning; *Alice in Wonderland*, Carroll; *The Importance of Being Earnest*, *The Picture of Dorian Gray*, Wilde.

Modern: A play by Shaw; *Age of Innocence*, Wharton, *Decline and Fall*, *A Handful of Dust*, *The Loved One*, Waugh; 1984, *Animal Farm*, Orwell; *Call It Sleep*, Roth; *Invisible Man*, Ellison; *Cat's Cradle*, *Slaughterhouse-Five*, Vonnegut; *Grendel*, Gardner; *Transformations*, Sexton; poems by Eliot, Auden, Cummings, Owen, Eberhart, Plath, Sexton; works by Nabokov, Malamud, Bellow, Roth, Cheever, Updike, Davies, Reed, Wolfe, Allen.

310—1 (1311)

Shakespeare

310—3 (1313)

An introduction to the study of Shakespeare. At least three plays will be read, one being *Hamlet*, with an emphasis upon close textual analysis. **Prerequisite:** *English 250-0* or *English 300-12*.

350—12 (1351)

English

(1352)

A special course for all post-graduates, and one year Seniors. Its purpose is to provide the writing and reading skills taught in *English 200* as well as to expose students to substantial works of literature. While reading plays, poetry, short stories, or novels, students undertake intensive writing exercises and learn to write effective papers of greater length. (Mr. McGraw, Mr. Price)

351—12 (1361)

English

(1362)

A special course, similar to *English 350*, but primarily for students for whom English is a second language. (Ms. Graham)

SPECIALIZED COURSES

Specialized Courses are open to students who have successfully completed *English 200*, *300* and *310*. Courses numbered in the *500s* are more intensive and demanding than those numbered in the *400s* and may

require more than the standard 4 to 5 hours per week of homework. Each course has four prepared class periods a week, unless specifically stated otherwise. Only courses with sufficient enrollment will be given.

401—123 (1411) **Non-Fiction Writing**
(1412)
(1413)

In this course writers will gain practice in these non-fiction modes: personal essay, analysis, argument, feature writing, and extended composition. There are daily writing assignments; class work focuses on student editing. The instructors assume that students entering the course write with grammatical and rhetorical competence. Students are encouraged to submit their work for publication in newspapers and magazines. (Mr. Gould)

403—123 (1431) **Introduction to Writing**
(1432)
(1433)

An introductory course to the writing of original stories, informal essays, and poetry. While examining examples of the genres mentioned, the student tries all these forms. With written permission from the department chairman, a student may take this course before he has completed the normal Competence-Literature sequence. (Mr. Owen)

405—123 (1451) **Literature of Two Faces**
(1452)
(1453)

The relationship between American and minority cultures. The course addresses one or two cultures in any given term. The instructors hope to introduce students to the myth, magic and hard realities of ethnic experience in this country. Authors students might read include Flannery O'Connor, James Baldwin, Gwendolyn Brooks, Leslie Marmon Silko, William Faulkner, June Jordan, N. Scott Momaday, Isaac Bashevis Singer, Sonia Sanchez, Imamu Amiri Baraka and Maxine Hong Kingston. (Mr. Sykes)

407—123 (1471) **Topics in English Literature**
(1472)
(1473)

Explores the diversity of English literature from Beowulf and medieval writers to James Joyce, Virginia Woolf, William Butler Yeats, and later moderns. Readings enable students to explore issue of self, society, and the universe that characterize different eras and that enlarge understanding of our literary tradition. Topics include English Comedy from Chaucer to Monty Python, the English Novel, the Literature of British Imperialism, Mythic Systems in British Writers and English Comic Theater.

408—123 (1481) **American Writers**
(1482)
(1483)

A thematic and comparative study of American literature. Although the emphasis is on studying works of fiction, some sections may also examine music and cinema. The course considers the works of linguistic and ethnic minorities and of women to be seminal in the American literary canon. Representative authors include Hawthorne, Twain, Dickinson, Fitzgerald, Hemingway, Erdrich, Baraka, Wilson, Shange, West, DeLillo, Shepard, Didion, and Walker. (Mr. Bernieri, Mr. Cobb, Mr. Thorn, Ms. Fan, Mr. Bardo, Ms. Moss, Mr. Price, Mr. O'Connor, Mr. Smith)

430—12 (1531) **Theme Studies**
(1532)

The Literature of Childhood and Innocence. This course studies the literature that succeeds or fails in preserving the innocence of childhood, inevitably lost through confrontation with reality, through a consideration of works either intended for or about children. The adult craving for pristine, idyllic origins will be explored as well as the consequences of a childhood that forfeits such beginnings. That the frequent use of monsters or other malevolent fantastic presences apparently contradicts the pristine and idyllic will be explored. Much emphasis will be placed upon examining these books as models of childhood that adults necessarily construct or reconstruct as we seek an understanding of the strategies behind these (re) constructions in attempts to answer: who needs these book more, adults or children? Texts may be drawn from, but are not limited to, the following: *Selected Tales*, Grimm; *The Annotated Alice*, Carroll; *The Annotated Mother Goose*, Peter Pan, *When the Tree Sings*, Haviaris; *Beyond the Looking Glass*, Cott; *The Story of Jumping Mouse*, Steptoe; *Platero and I*, Jimenez; *Woman Warrior*, Kingston; *Bluest Eye*, Morrison; *The Wizard of Oz*, Baum; *The Circus*, Casey; *Uncle Remus*, Harris; "The Ones Who Walk Away from Omelas," Le Guin; *Browngirl, Brownstone*, Marshall; and works by Chute, Robinson, Dr. Seuss, Baldwin, Twain, Helprin, Bambara, Williard and others. (Ms. Moss)

431—123 (1541) **Genre Studies**
(1542)
(1543)

Faces From the World House. This course examines literature in Germany, Japan, and Eastern Europe — concentrating on literature written since the Second World War. In the fall, students read some of the great contemporary German novels. In the winter the course surveys representatives of contemporary Japanese literature. In the spring, Polish, Czechoslovakian and Hungarian writers

will be read. Authors may include the following: Boll, Borchert, Durenmatt, Endo, Enchi, Fust, Havel, Ishiguro, Kipshardt, Kis, Klima, Kundera, Milosz, Mishima, Tanizaki. (Mr. Thorn)

☛ **ALL OF THE FOLLOWING COURSES MAY REQUIRE MORE THAN THE STANDARD 4 TO 5 HOURS PER WEEK OF HOMEWORK.**

500—23 (1602) James Joyce
(1603)

The first term is devoted to *Dubliners*, *A Portrait of Artist*, and *Stephen Hero*, and Ellmann's *James Joyce*; the second to *Ulysses* and *Finnegans Wake* in part. The purpose of the course is to follow the development of Joyce's method and style and to develop the skill to read important and difficult works without the aid of study guides and other secondary material beyond the Ellmann. Although the course may be taken in either term, the student gains a better sense of Joyce's genius by enrolling for two terms. (Dr. Germain)

504—123 (1641) Man and God
(1642)
(1643)

The course considers the search for meaning in what frequently seems to be an inexplicable world. Readings include: *King Lear*, Shakespeare; *As I Lay Dying*, Faulkner; *Long Day's Journey into Night*, O'Neill; *The Plague*, Camus; *The Fixer*, Malamud; *Notes from the Underground*, Dostoevski; *The Trial*, Kafka; *Wise Blood*, O'Connor; *Nine Stories*, Salinger; *The Birthday Party*, Pinter; *Alice in Wonderland*, Carroll; *Zorba the Greek*, Kazantzakis; *The Bluest Eye*, Morrison. (Miss St. Pierre)

508—23 (1682) Directions in 20th Century Drama
(1683)

The close study of significant contemporary drama. The winter term focuses on the first half of the 20th Century and plays by Shaw, Chekov, Strindberg, O'Casey, Brecht, Pirandello, and Ionesco are read; the spring term starts with Beckett, and includes plays by Williams, Bolt, Pinter, Albee, Stoppard, and Shepard. (Ms. Braverman, Mr. Owen)

509—1 (1691) Shakespeare on the Page and Stage
509—3 (1693)

The premise of this course is that Shakespeare's plays need to be "experienced," as reading alone may not reveal his remarkable scene-making ability, his brilliant theatricality. In this course we will experience the plays

as playtexts — directing and acting in scenes, as well as watching films of vintage and recent productions. As opportunities present themselves, we will attend stage productions in the area. (FALL: *Kings and Kingship* - readings: *King Lear*, *Richard III*, *Macbeth*, *1 Henry IV*, *Measure for Measure*. SPRING: *Labour of Love* - reading: *Much Ado About Nothing*, *All's Well that Ends Well*, *Antony and Cleopatra*, *Othello*.) (Mr. Lin, Mr. Gilbert)

510—123 (1701) The Short Novel
(1702)
(1703)

The course examines major experimental works in this genre and questions the artistic and social forces that gave rise to these novels. Each term draws comparisons between works from diverse world cultures and different points in modern history. Students may read works by Kafka, Camus, Salinger, Vonnegut, Gardner, Walker, Oates, Mann, O'Connor, McCullers, Melville, Hemingway, Rulfo, Pynchon, Durrell, Naylor, Puig, Kotzwick, McGuane, Hong-Kingston, Le Carre. (Mr. Pfeffer)

512—123 (1721) Satire and Comedy
(1722)
(1723)

A study of both the theories and practice of satire and comedy, with emphases on the eighteenth century and the modern period. Works by authors like Pope, Swift, Sterne, Ben Jonson, Waugh, and Heller will be studied in conjunction with the visual art of Hogarth and Steinberg, and recordings of modern performers like Peter Cook, Dudley Moore, Mel Brooks, and Peter Sellers. (Mr. Regan)

513—123 (1731) Novel & Drama Seminar
(1732)
(1733)

The course concentrates on major works of literature since 1880, primarily on the works of Virginia Woolf, Henry James, David Storey, Franz Kafka, Flannery O'Connor, T.S. Eliot, Samuel Beckett, Eugene O'Neill, William Faulkner, Gunter Grass, Saul Bellow, Gabriel Garcia Marquez, Grace Paley, John Barth, Isaac Bashevis Singer, Robert Stone, Elie Weisel, Harold Pinter, Bertolt Brecht, August Wilson, Toni Morrison, and Vladimir Nabokov. Students study the "world" of each writer and compare it with that of the others. As a basis for the comparison with the classics of the past, they also study a Greek Tragedy and *The Brothers Karamazov*. Class periods are devoted to seminar discussions (often led by students) and critiques of student writing. Students regularly stage dramatic readings, cast and performed by the class. (Mr. Wise)

514—123 (1741)
(1742)
(1743)

Creative Writing

A writing course in poetry and short fiction and the personal essay. Students may be asked to keep journals or to do short reading assignments, but the primary emphasis is on the body of work the student creates during the term. Content varies from term to term according to the instructor. (Mr. Gould, Mr. Cobb, Ms. Moss, Mr. Smith)

515—123 (1751)
(1752)
(1753)

Literature of the Quest

Focusing on the ancient pattern of the journey, the thresholds crossed and the vision obtained, the course asks students to interpret elements of the quest from a variety of perspectives. In the Fall Term readings include Socrates' *Euthyphro* and *Oedipus Rex*, the Abraham cycle, Beckett's *Waiting for Godot*, and Eliot's *The Waste Land*. The Winter Term considers the suffering encountered on the quest and explores themes from the gospel of Mark, *King Lear*, *The Great Gatsby*, Wiesel's *Night*, West's *Miss Lonelyhearts* and Flannery O'Connor's *Everything That Rises Must Converge*. The Spring Term questions the journey's end, reading the Amor and Psyche myth and *Alice in Wonderland*, comparing Jacob and Jesus and ending with two tragicomedies: *The Tempest* and *Who's Afraid of Virginia Woolf?* (Mr. Zaeder)

516—2 (1762)

Playwriting

Each student is expected to write at least one one-act play in addition to certain exercises in monologue, dialogue, and scene setting. The class reads aloud from students' work-in-progress while studying the formal elements in plays by important playwrights and by reading selected literary criticism focused on drama.

518—3 (1783)

Spenser and Milton

Students read minor works of both authors as well as Spenser's *The Faerie Queene* (Books I-II) and Milton's *Paradise Lost*. (Mr. Kalkstein)

520—123 (1801)
(1802)
(1803)

Images of Women

This course will examine, through the study of literature, (and, in some terms, film) woman as she perceives herself and as she is perceived by others. It will explore works by both men and women writers (and directors) and will focus on the constant and the changing image of woman in different literary periods. Texts may include: *Pride and Prejudice*, Austen; *Jane Eyre*, Bronte; a play by Ibsen; *Tess of the D'Urbervilles*, Hardy; *The Awakening*, Chopin; *The Yellow Wall-Paper*, Gilman; *Sons and Lovers*, Lawrence; a play

by Shaw; *A Room of One's Own*, Woolf; a novel by Woolf; *A Room with a View*, Forester; a novel or short story by Hemingway or Fitzgerald; *The French Lieutenant's Woman*, Fowles; *The Color Purple*, Walker; *The Penguin Book of Women Poets*. (Films, when included, will range from Hollywood features, 1940s through the present, to foreign films, with some documentaries. Examples: *Adam's Rib*, Cukor; a film by Hitchcock; *Coming Home*, Ashby; *The Color Purple*, Spielberg; *Cries and Whispers*, Bergman; *My Brilliant Career*, Armstrong; *Still Killing Us Softly*, Kilbourne.) (Ms. Fan, Ms. Boutilier, Ms. Braverman)

527—1 (1871)

Chaucer and His Age

This course examines the limits of young love, lust and heartbreak in medieval England. We read Chaucer's *Knight's Tale* and *Troilus and Criseyde* in Middle English, and *Sir Gawain and the Green Knight* in translation. (Mr. Wilkin)

528—2

Studies in Literature

(Not offered in 1990-91.)

'A Hard Rain's A-Gonna Fall' This course is a single term course which concentrates largely on America from 1958-1975 by exploring our country's involvement in Southeast Asia and the impact of this commitment on American film, literature and music. Students keep journals and are required to submit a paper or project which incorporates primary sources. Class time is arranged so that each week a film is shown at night, a regular class period is devoted to music and a two-hour seminar is held to discuss the many issues raised through all the media. Texts: *Shallow Graves*, *A Rumor of War*, *Mediations in Green*, *Streamers*, *Medal of Honor Rag*, *Imagining Argentina*. Films: *Dr. Strangelove*, *The Ugly American*, *Coming Home*, *Full Metal Jacket*, *Cutter's Way*, *The Deer Hunter*. Music: Bob Dylan, CSN&Y, Jefferson Airplane, Little Steven. (Mr. Bardo.)

530—123

Period Studies

(Not offered in 1990-91.)

Focusing on the major writers and texts of a particular literary epoch, the course considers how the literature illuminates and is illuminated by its historical context.

531—12 (1941)
(1942)

Writers in Depth

Focusing on one or two figures central to a particular literary epoch, the course allows students to study a writer's oeuvre in depth. Special attention will be paid to the biographical and historical contents of the literary works of these major figures. (Mr. Price)

Other courses related to English are Theatre 22 (Public Speaking), Art 311 (Contemporary Communications), History 66 (The Renaissance), and, in the Study Skills, section, Basic Study Skills, Language Skills I & II.

Foreign Languages

Andover's requirement of at least three high school years of an ancient or modern language rests on the firm belief that direct acquaintance, through language, with the spirit and people of other lands is a psychological and intellectual resource of inestimable value for each individual, for every country, and for our common world.

The diploma requirement is satisfied by completion of three trimesters at the 30-level reached through the regular sequence, or by one trimester of 40-level reached through the accelerated sequence. Placement of new students is based on their previous school record, on the questionnaire sent to them and their current language teachers in the Spring, and, when appropriate, on a personal interview with the language chairman at Andover. Details regarding various options and the diploma requirement as it is applicable to "incoming Uppers and Seniors who begin a new language at Andover" are available from the Registrar's Office. Further information may be found in the pamphlet entitled *Foreign Languages at Andover*.

With the exception of Italian (limited to Seniors), each of our languages, ancient and modern, may appropriately be started by students of any grade, Juniors (9th) through Seniors. Most Andover students continue their language study beyond the third year. Some study a second language in addition.

Students are advised to take the CEEB Achievement Test in a foreign language as late as possible in their course of study, and in no case earlier than the second trimester of the third level.

Small classes, flexible placement, and opportunities for acceleration assure that each student is in the optimum learning situation. In the case of modern languages, the foreign language is the language of the classroom. In conversation, in reading, and in writing, the goal is direct communication in the foreign language rather than through translation. The classroom experience is expanded by the language laboratory; media resources (e.g., periodicals, radio broadcasts, videotapes, movies, computers); the staging of plays; club activities; language events and pro-

grams at Andover or nearby schools. At all levels of instruction attention is focused both on basic language skills and, increasingly, on the literature, history, and various art forms which reveal the people whose languages are being studied. For information on *School Year Abroad* and other opportunities to study abroad, students should consult their language instructor or the Chair of the Language Division. (See page 3 for fuller description.)

Chinese

Although the Chinese language may appear mysterious to Western eyes and ears, it is actually no more difficult than any other to speak. With no conjugations, verb tenses or declensions there are some aspects which actually make it easier. To learn Chinese is to open a bridge to the Orient.

Mandarin Chinese is the language of instruction. Pinyin is the standard Romanization system for all courses. Simplified characters are taught in early courses and traditional characters are introduced from intermediate courses on. Emphasis in beginning courses is on listening and speaking skills in typical everyday situations for learners of Chinese as a foreign language, although students are exposed at an early stage to the more challenging task of learning to read and write the non-alphabetical characters. Frequent use is made of tapes, video cassettes and computer software. Opportunities are available for qualified students to participate in a six-week study-travel summer exchange program in Harbin and a ten-week spring term exchange program in Beijing, China.

10—0 (4410) Beginning Chinese
Five prepared class periods. An introduction to modern spoken and written Chinese, stressing pronunciation and aural-oral facility, and including the reading and writing of characters.

12—23 (4425) Accelerated Beginning Chinese (T2)
(a two-term commitment)
Five prepared class periods. Especially competent students will be recommended by the department for this

accelerated course at the conclusion of the first trimester of *Chinese 10*. Upon successful completion of this course, students move on to *Chinese 22-0*.

10-20—0 (4430) Intensive First and Second-Level Chinese

Five prepared class periods. Open to Seniors, and to Up-pers with permission. An intensive yearlong course covering the essential material of both *Chinese 10* and *Chinese 20*.

20—0 (4440) Second-Level Chinese

Five prepared class periods. Continued emphasis on proficiency in typical everyday situations. All essential features of Chinese grammar are covered. Texts with both characters and *pinyin* Romanization are replaced by all-character texts.

22—0 (4450) Accelerated Second-Level Chinese

Five prepared class periods. Placement is made by permission of the department. Upon successful completion of this course, students move directly to Fourth-Level Chinese.

30—0 (4460) Third-Level Chinese

Four prepared class periods. More emphasis on reading and writing. Graded readers are used as basic texts. Their contents include folk tales, stories, episodes from classical literature, biographies and introduction to Chinese history and culture. Regular written assignments, including short compositions.

40—0 (4480) Fourth-Level Chinese

Four prepared class periods. Readings, in both traditional and simplified characters, are selected to stimulate interest in Chinese culture, ancient and modern. Topics in history, literature, and current events will serve as a basis for discussions and short compositions. Graded readers and simple originals are used as basic texts. A term paper is required at the end of each trimester.

50—0 (4490) Introduction to Chinese Linguistics

Four prepared class periods. Introduction to the study of Mandarin Chinese and methods of linguistic research. Analysis of Chinese, using data from language learning and language change. Investigation of certain topics on Chinese sounds, words, sentences, and meaning. A research paper on Chinese linguistics is required at the end of each trimester.

French

The French Department offers courses at six different levels from beginning through Advanced Placement and beyond to courses for fluent speakers. At all levels French is the language of the classroom and in all courses it is taught in cultural contexts. The first two years emphasize basic language structures; the third serves as a transition to advanced courses which offer in-depth study of the literature and civilization of France and other French-speaking countries, especially those in Africa and North America. Each year, the Academy enrolls many French-speaking students from abroad who provide important first-hand contact with francophone cultures. Students are encouraged to supplement classroom study with travel and study overseas, whether in France (*School Year Abroad* in Rennes, trimester programs in Paris and Antibes) or in the Ivory Coast (trimester program in Abidjan). There are also a variety of summer programs offered by other institutions. Information on any of these off-campus opportunities can be obtained from the Foreign Language Office.

10—0 (4010) Beginning French

First-year French for students who have had no previous courses in the language. Five prepared class periods. Listening comprehension and the use of basic conversation patterns of French speech are emphasized. Elementary grammatical and idiomatic structures are introduced as well as appropriate reading material. Students make extensive use of video materials both in and out of class; assignments are also regularly required in the language laboratory. Text: *French in Action*, Capretz.

11—0 (4030) First Level French

First level French. Five prepared class periods. This course is designed for the student who has had previous instruction in the language, but whose knowledge and skills are not secure enough for entrance to a second-level section. It is also appropriate for students with experience in other languages who wish to begin the study of French. The course emphasizes the development of oral-aural skills and prepares for *French 21* the following year. Students make extensive use of video materials both in and out of class; assignments are also regularly required in the language laboratory. Students who demonstrate unusual aptitude and interest are invited to enter *French 22*, the second level accelerated course. Text: *French in Action*, Capretz.

21—0 (4060) Second Level French
 Second level French. Five prepared class periods. For students who have completed *French 10* or *French 11* and for new students who qualify through teacher recommendations or placement examination. While continuing to develop aural-oral skills, the course involves reading non-technical French prose and writing simple compositions. Text: *Encore Une Foix*, Herbst, Sturges.

22—0 (4070) Accelerated Second Level French
 Accelerated second level French which covers the grammar of both second and third-year courses. Five prepared class periods. Upon successful completion of this course, students continue their studies in fourth-year courses. Because of the rapid pace, each student's progress will be closely evaluated in November to determine whether it is in his or her best interest to continue in this accelerated section or to move to *French 21*. Texts: *La Grammaire à l'Oeuvre*, Barson; *Le Petit Nicolas*, Goscinny; *Les Petits Enfants du Siècle*, Rochefort; *Les Jeux sont faits*, Sarte.

THIRD LEVEL COURSES

A two-trimester departmental Conversation and Composition course is followed by a trimester course which creates a transition to more specialized studies.

Conversation and Composition

Four prepared class periods. Students gain practice in conversation and composition in a course which stresses the development of all four basic language skills: listening, speaking, reading, writing. The focus of the course may be chosen between the following options.

**30—12 (4094) Conversation and Composition:
 Civilization (T2)**
 (a two-term commitment)

Students will thoroughly review grammar in the context of discussions on topics dealing with everyday life. Weekly compositions are required. Students have a chance to actively use material covered and demonstrate their oral command of the language through the production of several live or video-taped skits. Text: *Grammaire à l'Oeuvre*, Barson.

**31—12 (4104) Conversation and Composition:
 Fiction (T2)**
 (a two term commitment)

Short works of fiction are the starting points for discussions and compositions. Usually the fictional passages

selected also serve as an example of grammatical structures studied simultaneously. Several times a term student writing takes the form of scenarios which are performed live in class or video-taped as an assignment. Text: *Grammaire à l'Oeuvre*, Barson.

SPECIALIZED COURSES

Four prepared class periods. Each third trimester course involves learning about a particular subject in French, with language review supplied as needed. Whereas any one of the seven courses offered below could fulfill course objectives for all students, the Department prefers to offer variety, with the understanding that student choice can be accommodated only to the extent that overall enrollment permits.

**33—3 (4123) The Arts in the
 French-Speaking World**

Four prepared class periods. A leap into the visual and musical world of French-speaking people during a particular period of time. Several introductory lectures will be given by teachers from outside the French Department. Otherwise, discussion and materials will be in French. Emphasis will be placed on the relationship between art, music, and society. To complement the films, slides, and recordings, students will read poems, song lyrics or excerpts from the literature of the period.

34—3 (4133) The Novel
 One novel will be examined during the term, with emphasis on vocabulary building, oral expression in class discussion and methods of literary analysis. (Novels selected in the past have included Sartre, *Les Jeux sont faits*, Camara Laye, *L'Enfant Noir*, Vercors, *Le Silence de la Mer*.)

36—3 (4143) Film
 Several films chosen by theme or by director will be viewed and discussed. At least one script or the corresponding novel, play or cartoon will be read. Students may be asked to produce a video sequence of their own creation.

37—3 (4153) Journalism
 Students discuss examples of French journalism and then write their own articles, editorials, sports columns, advertisements, movie reviews, and interviews which they assemble in a French newspaper as their final project. Text: *En Revue*, Schorr.

38—3 (4163)

Short Stories

Francophone literature abounds in examples of the tale, from the fairy tales of Perrault and folk tales of various francophone countries to the satirical tales of Voltaire. This course will offer an overview of the genre, while concentrating on particular examples.

39—3 (4173)

Theatre

An active participation course in which the student follows one play from the initial reading through its final production, taking part in each of the four major phases: reading, analysis, production, performance. (Plays presented in the past have included *Le Malentendu*, Camus; *La Cantatrice Chauve*, Ionesco; *Le bal des voleurs*, Anouilh.)

40—123 (4191)

French Civilization

(4192)

(4193)

Four prepared class periods. The course, consisting of three term-contained units, deals with aspects of French civilization such as the family, the school system, politics, history, women's roles, and francophone cultures. Students increase their practical vocabulary through discussion of articles, short stories, novels, song lyrics, films, and comic strips.

41—1 (4201)

The Non-European French World

Four prepared class periods. As an international colonial power France spread her culture throughout the world. The course studies the civilizations of West, Equatorial, and North (Arab) Africa as well as the francophone civilization of the Antilles (Haiti, Martinique, and Guadeloupe). In addition to geographical, social, and historical study, the course will include the following reading: J. Roumain, *Gouverneurs de la rosée*; Aimée Césaire, *La tragédie du roi Christophe*; F. Oyono, *Le vieux nègre et la médaille*.

42—0 (4210)

French Literature

Four prepared class periods. A transition from the use of reading as a means of learning the language to the use of language as a means of learning literature. Vocabulary expansion, increased oral fluency and written accuracy are developed within the context of literary analysis. Readings have recently included: *L'Étranger*, Camus; *Candide*, Voltaire; *Rhinoceros*, Ionesco. Students successfully completing this course are encouraged to take French 52.

44—1 (4231)

Advanced Conversation

Four prepared class periods. Intended for students who understand, read and write French well and who already speak at a competent level, but who desire to develop further conversational skills and acquire the vocabulary and idiomatic expression necessary to be able to discuss major cultural and social issues. The course is based on current

articles taken directly from the French and francophone press. The students also read further, develop their own points of view, and keep a journal about current social trends and problems. Diction, elocution, and intonation are also stressed through debates and role-playing.

45—2 (4242)

**History of France:
The French Revolution**

Four prepared class periods. This course will examine the tumultuous period in French History between 1789 and 1848 by examining the causes, events and significance of the French Revolution, including the reign of Napoleon, as well as the long-term consequences on the French nation until the mid-19th century. Emphasis will be placed not only on historical events, but their influence on the French art, music and architecture of the time.

46—3 (4253) History of France: Crises and Culture

Four prepared class periods. This course will focus on the history and culture of France from the Revolution of 1848 until the First World War, with emphasis on the prolonged struggle to institute democracy in the place of monarchy, the development as an industrialized nation with the pressures for social reform, and France's grandeur in the world as a colonial power as well as in the arts. Against this backdrop of upheaval and reform, particular attention will be paid to the study of French Impressionist painting, the music of Debussy and Ravel and the sculpture of Rodin.

51—123 (4261)

Advanced Placement Language

(4262)

(4263)

Five prepared class periods. A course designed to meet the requirements of the Advanced Placement Examination in French Language. Open to students who have completed three terms of fourth-level French and to qualified new students. Emphasis is placed on vocabulary, grammar, conversation, composition, and reading, not only in literature, but in current newspapers and periodicals. The choice of texts is generally determined by the class and the instructor.

52—0 (4270)

Advanced Placement Literature

Five prepared class periods. Open with departmental permission, to students who have completed three terms of fourth-level French and to others who are properly qualified. Primarily a seminar in which students share their interpretations of works studied in class discussions and oral exposés, the course also includes lectures and instruction in *explication de textes*. Preparation for the Advanced Placement Examination in French Literature includes the close reading of texts such as: *La Fontaine*, *Fables*; Racine, *Phèdre*; Molière, *L'école des Femmes*;

Prevost, *Manon Lescaut*; Flaubert, *Un Coeur simple*; Sartre, *Huis clos*; Duras, *Moderato Cantabile*; poetry of Apollinaire, and Baudelaire. This course may require more than the standard 4 to 5 hours per week of homework.

60—123 (4281) Modern Literature
(4282)
(4283)

Two prepared class periods plus one weekly (90 minute) seminar. Open to students who have completed fifth-level French or the equivalent. The course studies selected novels and dramas representative of modern era. Emphasis is on particular writers and what they add to our understanding of the human condition in our times. Authors studied may include: Proust, Gide, Colette, Malraux, Mauriac, Aragon, Saint-Exupéry, Giono, Anouilh, Giraudoux, Aymé, Camus, Sartre, de Beauvoir, Hébert, Laye and Senghor.

German

A major world language whose cultural heritage has enriched western civilization for centuries, German has won a new relevance and vitality through its predominance in high technology and commerce, and its prominence in the political and economical realignment of modern Europe. As the only Germanic language taught at the Academy, it also offers the student unique insights into the Anglo-Saxon roots of English, its sibling. The Department offers a 5-year course of study with the purpose of developing the ability to understand spoken German and to speak, read and write German with facility. Students who demonstrate unusual aptitude and interest are invited into the accelerated sequence. Consistent with its commitment to the spoken language, the Department often holds oral as well as written final examinations. In some courses theater is used to enliven speech development and cultural immersion. Students are encouraged to supplement their on-campus language experience through a winter or spring trimester of study in Göttingen, Germany as arranged, individually through the department and the Dean of Studies.

10—0 (4300) First-Level German
Five prepared class periods. The beginning course develops aural comprehension and oral expression, as well as a foundation in the basic grammar. Current texts: *Deutsch für Ausländer*, Kessler; *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; departmental materials.

12—23 (4315) Accelerated First-level German (T2)
(a two-term commitment)
Five prepared class periods. This course is for especially competent members of *German 10* upon recommendation of their instructor. Successful completion of 12 allows students to advance to 22. Current texts: *Deutsch für Ausländer*, Kessler; *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; departmental materials.

10-20—0 (4320) Accelerated First and Second-Level German
Five prepared class periods. A yearlong introductory course whose goal is to cover the essential material of first and second-year German, 10-20 is particularly suited to students who have already fulfilled the diploma requirement and desire proficiency in another language. For Seniors, and for Uppers with permission. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Kindergeschichten*, Bichsel; supplementary materials. This course may require more than the usual 4 to 5 hours of homework per week.

20—0 (4330) Second-Level German
Five prepared class periods. The study of grammar and basic patterns is continued. Reading and writing are introduced. Current texts: *Deutsche Sprachlehre für Ausländer*, Schulz-Griesbach; *Leutebuch, ein leichtes Lesebuch*, Holschuh; *Vater und Sohn*, Eppert; selected readings and tapes.

22—0 (4340) Accelerated Second-Level German
Five prepared class periods. Open to competent students from 12 and to other qualified new students with permission. Successful completion of this course, which attempts to cover the essential material of second and third-year German, enables advancement to *German 42* or 40. Current texts: *German in Review*, Sparks and Vail; Schulz-Griesbach; *Der Richter und sein Henker*, Biedermann und die Brandstifter, Frisch; supplementary readings and tapes. This course may require more than the usual 4 to 5 hours of homework per week.

30—0 (4350) Third Level German
Four prepared class periods. This course emphasizes review, reading and listening comprehension, vocabulary, and written and oral expression in preparation for the College Board Achievement Test. Current texts: *German in Review*, Sparks & Vail; selected plays by Dürrenmatt;

Vater und Sohn, Eppert; *Biedermann und die Brandstifter*, Frisch; selected readings and tapes.

40—123 (4371) Contemporary German Language and Culture
(4372)
(4373)

Four prepared class periods. This course utilizes contemporary cultural materials such as periodicals, tapes, videos, and readings to introduce students to the knowledge, skills and vocabulary necessary to engage with Germans in Germany. Normally required of those Seniors intending to study in Germany Winter Term. Among the materials used are the newspaper *Die Zeit* and the periodical *Der Spiegel*.

42—0 (4380) Advanced Placement German Language and Literature

Five prepared class periods. This course utilizes advanced German literary works as a basis for conversation and composition in preparation for the Advanced Placement Language Test. Selective review is incorporated. Current texts: *Cornet*, Rilke; *Die Verwandlung*, Kafka; *Der Kaukasische Kreidekreis*, Brecht; selected poems; *German in Review*, Sparks & Vail. This course may require more than the usual 4-5 hours per week of homework.

50—123 (4391) Fifth-Level German
(4392)
(4393)

Four prepared class periods. Open to students who have successfully completed 3 terms of fourth-level German or its equivalent, this course varies with the needs of the class but is usually a seminar in the analytical reading of modern German classics. There is frequent writing. A major term paper in German replaces the final exam. Authors currently read: Böll, Kafka, Lenz, Wolf, Mann and Brecht.

Greek

Through the study of Greek the Department of Classics offers students a direct entry into Greek literature. The Greek alphabet is easily mastered in the first few class meetings, and students quickly discover that the Greek language has poetic and expressive qualities which stimulate the imagination and illuminate the early political and intellectual development of the Mediterranean basin. The regular sequence in Greek is *Greek 10*, *20*, *30*, and *40*, though Upper Middlers wishing to accelerate may want to consider *Greek 10-20* followed by *Greek 30*.

10—0 (5010) Greek, First Level

Five prepared class periods. The course introduces the student directly to the Classical Greek of Periclean Athens through a series of readings which present not only the vocabulary, forms and syntax of the language but also the thoughts, feelings and actions that exemplify the Greek genius. Though preliminary selections are necessarily simplified, within the first year students are reading excerpts in their original form from various Greek authors.

10-20—0 (5020) Greek, First and Second Level, Intensive

Five prepared class periods. The course is open to Seniors and Uppers. It covers in one year the essential material of *Greek 10* and *Greek 20*: basic forms and structure, along with ample selected readings from various Greek authors.

13—1 (5031) Introduction to Greek
13—2 (5032)
13—3 (5033)

Four prepared class periods. The course is for students whose curiosity for the Greek language and literature has been aroused by their studies in other areas. For students who plan some day to study Russian or German, this course provides an excellent introduction into the intricacies of a highly inflected language. The student is also treated to an inside preview of a literature which, over the centuries, has provided inspiration and models for the literature of the Western World. It is a term-contained course, but students wishing to continue with Greek will have the opportunity to do so.

20—0 (5040) Greek Second Level

Five prepared class periods. The course continues the format of *Greek 10*, with further systematic development of reading skills and control of vocabulary, forms, and syntax through the medium of more advanced selections

from the Greek masterpieces, always with the purpose of understanding the spirit of the people that produced them.

30—0 (5050)

Greek, Third Level:

Iliad and Odyssey

Four prepared class periods. Selected books of the *Iliad* and the *Odyssey*, and sometimes a play of Euripides or Sophocles. Students examine the nature of tragedy, heroism, and self-discovery.

40—123 (5061)

(5062)

(5063)

Greek, Fourth Level:

History, Tragedy, Lyric

Four prepared class periods. Ancient concepts of justice and morality are examined through the works of Herodotus and Thucydides. Human tragedy is explored in a play of Sophocles or Euripides. One term is devoted to the study of emotion and self-expression in the Greek lyric poets.

Italian

Students may apply to spend the Spring term in Italy, living with a family and attending high school. See Dr. Pascucci for further information.

10-20—0 (4400)

First and Second Level, Intensive

Open to Seniors, and to Uppers with permission. Five class periods. Three additional meetings (30 minutes), to be arranged, will take the place of some of the usual homework obligation on those days; these small drill sessions help achieve spontaneity in understanding and speaking Italian. A college text is supplemented by readings, recordings, songs, and arias from Italian opera. An Italian movie is read, studied, and seen. This course prepares students for Italian at college at intermediate and advanced levels.

Latin

Through the study of Latin, the Department of Classics offers students a direct entry into Latin literature.

Since the past is in a real sense inherent in the present, the Department teaches language in a literary and historical context that gives students the opportunity to savor the beauty and to appreciate the uniqueness of Roman culture, while providing a valuable perspective on their own modern world.

10—0 (5110)

Latin, First Level

Five prepared class periods. The purpose of the course is for students to learn to read Latin literature with discernment and pleasure. Students learn the basic forms and syntax through reading and oral drill. More advanced grammatical constructions (subjunctives, indirect discourse, and the ablative absolute) are introduced but not studied in depth. Attention is given to aspects of Roman civilization, word formation, and the influence of Latin on English. In addition there are readings from the literature of the Bible in Latin and some selections from Roman authors in English. The text is Lawall and Tafe, *Ecce Romani*, Books 1-3 (Longman).

10-20—0 (5120)

Latin, First and Second Level, Intensive

Five prepared class periods. For Upper Middlers and Seniors. A year-long accelerated introductory course covering the essential elements of *Latin 10* and *Latin 20*.

13—1 (5141)

13—2 (5142)

13—3 (5143)

Introduction to Latin

Four prepared class periods. The course is for students seeking an introduction to the Latin language, or those whose studies in other languages (including English) have aroused their curiosity about the workings of languages (grammar, syntax and vocabulary). It offers special profit and fascination to students of French, Spanish, and Italian, since it gives a wider perspective to much of what they already know. For students who plan some day to study Russian or German it serves as an introduction to the workings of highly inflected languages. It is a term-contained course, but students wishing to continue with Latin will have the opportunity to do so. The text is Lawall and Tafe, *Ecce Romani*, Book 1 (Longman).

20—0 (5150)

**Latin, Second Level:
Caesar, Ovid, Nero**

Five prepared class periods. During the Fall Term the grammar and readings in Lawall and Tafe, *Ecce Romani*, Book 4 (Longman) are completed. In the Winter Term students read, in both Latin and English, Roman biography from the late Republic and early Empire. Selections of prose by and about Julius Caesar and Augustus as well as poems of love and mythology of Ovid are included. Students will find fascination in the Spring Term studying the biography of the imperial ogre Nero and Petronius' satiric account of a feast in Nero's time with the text, Balme, *The Millionaire's Dinner Party* (Oxford).

30—0 (5170)

**Latin, Third Level:
Cicero, Vergil, Apuleius**

Four prepared class periods. The swan song of the Roman Republic is heard through the study of the life of Cicero with readings in Latin and English from Cicero himself, Catullus, and other Latin authors. Systematic review of grammar strengthens the student's Latin reading skills. The poetry of Vergil is introduced in the Winter Term with *Aeneid*, Book II. In the Spring Term the student becomes familiar with life under the Empire through the social, religious, and literary elements of Apuleius' *Golden Ass* and Juvenal's *Satires*. The basic text is Gillingham and Barrett, *Latin: Our Living Heritage*, Book III (Merrill).

**40—123 (5191)
(5192)
(5193)**

**Latin, Fourth Level: Vergil,
Suetonius, Catullus**

Four prepared class periods. The Fall Term is spent reading *Aeneid*, Book IV, the great tragic romance of Dido and Aeneas. The Winter Term offers the contrast of the Silver Age prose of Suetonius' biography of the Emperor Claudius along with Seneca's *Apocolocyntosis*, a rude farce about Claudius' deification. The Spring Term focuses on the emotional lyric poetry of Catullus, the most romantic and accessible of the ancient love poets.

**50—123 (5201)
(5202)
(5203)**

**Latin, Fifth Level:
Vergil, Tacitus, Pliny, Horace**

Four prepared class periods. In the Fall Term the students enter the world of Book VI of Vergil's *Aeneid*, examining his literary form and technique, as well as the social and political dimensions of his epic. The Winter Term students study the Golden Age of Augustus through the lyric poetry of Horace, whose work displays flawless control of language and timeless ethical and moral ideals. Completion of the sequence of *Latin* 30, 40, and 50 will qualify the student for the Advanced Placement Examination in Latin. The Spring Term takes up selections from Tacitus' *His-*

tories and *Annals*. Together with Tacitus' gripping study of hopelessness and disillusion in the decaying Rome of tyrants like Nero, students read from Pliny's letters, including his eyewitness accounts of the eruption of Vesuvius and the persecution of Christians.

Russian

Communication in Russian and a knowledge of Russian culture are essential for productive interaction with the U.S.S.R. in technology and science, and for achieving controlled, responsible international relations.

As of 1987, this goal has been realized for Phillips Academy Russian students through an official cultural and educational exchange with the Novosibirsk High School of Math and Science in the U.S.S.R. This term-long exchange sends PA students of Russian to attend classes at the Novosibirsk High School while Soviet high school students study here at Andover.

Before studying Russian, many consider it strange and difficult; but its alphabet and vocabulary have the same sources as English, and it follows the same principles of grammar. Continuous oral, visual and instructional use quickly makes Russian familiar and enjoyable.

The Russian Department offers a five-year course of study. This well-established program ensures confident progress in speaking, aural comprehension, reading, and writing. Elementary courses use computer drills to strengthen grammar skills. At the upper levels, students use Russian word processors for their compositions. Students who demonstrate unusual aptitude and interest during the first term are invited to enter special accelerated sections in the second term. It is the policy of the Department to use Russian exclusively in the classroom.

10—0 (4500)

**Introduction to Contemporary
Russian**

Five prepared class periods. A yearlong elementary course in speaking, listening, reading and writing. Texts: Kostomarov, *Russian for Everybody* (Russky Yazyk—Moscow); reference materials.

12—23 (4515) Contemporary Russian (Honors)(T2)
(a two-term commitment)

Five prepared class periods. Especially competent students will be recommended for this accelerated course at the conclusion of the first trimester of *Russian 10*. Successful completion of 12 enables students to enter 22. Texts are essentially those of *Russian 10* and *Russian 20*. This course may require more than the standard 4 to 5 hours per week of homework.

13—3 (4523) A Short Course in Beginning Russian

Four prepared class periods. Open to Seniors and Up-pers. A term-contained introduction to speaking, reading, and writing Russian, using conversational text materials. This course enables students to feel comfortable with the somewhat different features of a Slavic language. It also gives a sound foundation for continuing courses in Russian language, history, and literature, whether at Andover or in college.

For another course related to Russian history and culture see History 45.

10-20—0 (4530) Intensive Contemporary Russian

Five prepared class periods. Open to Seniors, and to Up-pers with permission. A yearlong accelerated introductory course covering two years in one. Texts: Kostomarov, *Russian for Everybody*; reference materials. This course may require more than the standard 4 to 5 hours per week of homework.

20—0 (4540) Intermediate Contemporary Russian

Five prepared class periods. Completion of the elementary course with continued emphasis on active use. Texts: Kostomarov, *Russian for Everybody*; Bond, *Russian Graded Readers* (Heath); reference materials.

22—0 (4550) Intermediate Contemporary Russian (Honors)

Five prepared class periods. A yearlong accelerated course open to students who have successfully completed *Russian 12* and to other qualified students with departmental permission. Successful completion enables students to advance to fourth-level courses. Texts and reading materials are essentially those of *Russian 20* and *Russian 30*. This course may require more than the standard 4 to 5 hours per week of homework.

30—0 (4560) Russian Expression: Conversation and Composition

Four prepared class periods. Reading, conversation, and writing. Texts: Pekhlivanova & Lebedeva, *Russian Gram-*

mar in Pictures (Russky Yazyk — Moscow); Bond, *Russian Graded Readers* (Heath). Reading materials include selections on Russian culture, history, geography, and Soviet civilization. Students use word processors in their composition work.

40—123 (4571) Advanced Russian Composition
(4572) **and Russian Classical Literature**
(4573)

Four prepared class periods. Further work in conversation and writing, and an introduction to the "Golden Age" (19th Century) of Russian literature with selected readings (both adapted and in the original) from such authors as Pushkin, Chekhov, Gogol, Tolstoy, as well as some Soviet writers. Students use word processors in their composition work.

42—0 (4580) Advanced Placement Russian

Five prepared class periods. This course utilizes advanced literary works to prepare students for the college placement Russian Proficiency Tests. Students will progress from adapted texts to original literary materials with primary focus on further grammar development and vocabulary acquisition. Two of the five weekly meetings will be used exclusively for advanced conversation where students will view video tapes and listen to actual Soviet broadcasts to aid them in contemporary spoken Russian. There will be extensive work on texts which will be discussed orally and in compositions. Students use word processors in their composition work. This course may require more than the standard 4 to 5 hours of homework per week. Texts will be selected by the instructor to annually insure their contemporary value.

50—123 (4591) The Soviet People, Their Heritage
(4592) **and Literature**
(4593)

Four prepared class periods. Fall Term: RUSSIAN LITERATURE — readings from contemporary and prerevolutionary authors.

Winter Term: SOVIET LITERATURE — an overview tracing the evolution of Russian literature from the Revolution through the war and post-war periods, and including writers in exile. Authors vary according to needs and interests of the class and may include Gorky, Bunin, Sholokhov, Bulgakov, Yevtushenko, Voznesensky, Solzhenitsyn.

Spring Term: THE SOVIET PRESS — a view of Soviet Life and culture as reflected in the media. The text is a subscription to a major Soviet newspaper. Students use word processors in their composition work.

Spanish

The Spanish Department offers a six-year course of study. Students who demonstrate unusual ability and interest during the first year are invited to join an accelerated sequence. The language of the classroom is Spanish, and extensive use is made of the language laboratory. Students learn to understand, speak, read, and write the language, and also are given a comprehensive introduction to the literature and culture of Spain and Latin America.

The Department offers various programs of study and travel abroad which enhance a student's language experience. *School Year Abroad* in Barcelona and the Madrid and Mexico trimester exchanges are some of the possibilities. More information is available through language instructors.

10—0 (4600) **Beginning Spanish**

Five prepared class periods. A first-year course designed for those who have not studied Spanish before. The audio-lingual approach is used, stressing understanding and speaking. The textbook is supplemented by language laboratory practice and audio-visual materials. Selected readings and writing exercises are introduced as the student acquires confidence in oral expression and control of certain grammar.

11—0 (4620) **First Level Spanish**

Five prepared class periods. For new students who have been exposed to Spanish but who are not fully prepared for *Spanish 20*. The course covers basic grammatical structures through an active oral approach. The text is supplemented by language laboratory practice, selected readings and writing assignments.

10-20—0 (4630) **Accelerated First and Second-Level Spanish**

Five prepared class periods. Open to Seniors, and to Up-pers with permission of department chair. A yearlong accelerated introductory course which prepares the student for the third level. It develops proficiency in the four skills. The text is supplemented by short story and theatre selections.

20—0 (4640) **Second-Level Spanish**

Five prepared class periods. Emphasis is on oral communication and control of essential grammar with continued practice in reading and simple theme writing. An anthology of short stories supplements the text.

22—0 (4650) **Accelerated Second-Level Spanish**

Five prepared class periods. Open to students who have completed *Spanish 10* or *11* with distinction, and to other qualified students with departmental permission. An accelerated second-year course which develops communicative competence and provides intensive reading and writing practice. Students normally must maintain an honors grade to remain in this course. It enables honors students to enroll in a 4th level course.

THIRD LEVEL COURSES

Intensive language practice is the focus of *all* third-level courses during the fall term. In the remaining two terms elective courses 31, 32, or 34 may be chosen; they are of equal difficulty and assure the development all language skills and the mastery of specific grammatical functions.

30—1 (4691) **Intensive Language Practice**

Four prepared class periods. Intensive review of certain grammatical structures, with particular emphasis on verb tenses (indicative and subjunctive) and idiomatic expressions. Its main goal is to develop greater accuracy and fluency in both written and oral expression.

31—23 (4715) **Culture and Civilization of the Hispanic World (T2)** (a two-term commitment)

Four prepared class periods. An intermediate course which takes a social-studies approach to the culture and civilization of the Hispanic world and develops oral and written self-expression through historical and cultural themes.

32—23 (4725) **Readings in Spanish (T2)** (a two-term commitment)

Four prepared class periods. An intermediate course which develops oral and writing skills through the study of Spanish and Latin American literature. The readings include short stories, poetry, plays and a novel.

34—23 (4745) **Conversation and Composition (T2)** (a two-term commitment)

Four prepared class periods. An intermediate course which has as its principal goal the development of conversational and writing skills by dealing with topics of a general and contemporary nature.

40—12 (4804)**Current Events; Video (T2)**

(a two-term commitment)

Four prepared class periods. FALL - *Current Events*: This term the course is designed to expand and refine speaking, reading, and writing skills in Spanish. Students subscribe to the weekly International Edition of *El País*, one of Spain's leading newspapers. The articles are used as a basis for class discussions, oral presentations and weekly written analyses. At the end of the term, students produce their own newspaper and a newscast on video. WINTER- *Video*: This term the course exposes students to authentic and sophisticated native language usage through videos representing the major Spanish accent groups. Major emphasis is placed on dramatic representation, on the development of auditory skills and idiomatic language, on imitating native accent and intonation patterns and on refining writing skills. The course also involves reading, discussing and filming of student presentations of one-act plays, and comparative study of written and filmed versions of selected pieces of Spanish and Latin American literature.

41—12 (4814)**Video; Current Events (T2)**

(a two-term commitment)

Four prepared class periods. FALL - *Video* (See *Spanish 40 - Winter*.) WINTER - *Current Events* (See *Spanish 40 - Fall*.)

42—0 (4820)**Contemporary Spanish and Spanish American Literature**

Four prepared class periods. Short stories, plays and poems by contemporary Spanish and Spanish American writers such as García Márquez, Cortázar, Rulfo, Borges, Donoso, Poniatowska, LaForet, Ferré, Fuentes, are closely examined in class and in weekly essays. Develops proficiency in all language skills.

43—3 (4833)**Introduction to Spanish Literature**

Four prepared class periods. This course introduces students to important Latin-American and Spanish literary works and prepares them to take the courses in A.P. Spanish Literature or A.P. Spanish Language (52 or 50). Students learn to read and analyze literary texts, to discuss characterization, theme, and literary form, and to write analytical essays on literature. Open to students who have completed the equivalent of our third-year courses or beyond.

50—12 (4844)**Advanced Spanish Language (T2)**

(a two-term commitment)

Four prepared class periods. A course, organized around contemporary themes, designed to develop students' Spanish language skills at the advanced level. Students consolidate skills of narration, description, exposition, and hypothesis, in line with both A.C.T.F.L. Advanced

and Superior-level scales, and the expectations of the A.P. examination in Spanish Language. Emphasis is placed on mastery of grammar, syntax, and idiomatic expression at sophisticated levels. Students engage in readings (in literature as well as newspapers and periodicals), conversation, composition, and research or "field" projects. Open to students who have completed three terms of fourth-level Spanish and to other qualified students with departmental permission.

52—0 (4850)**Advanced Placement Course in Literature**

Four prepared class periods. This course emphasizes discussion and analysis of literary works in the classroom and through frequent written assignments. It prepares the student for the A.P. examination in Spanish literature. The readings include representative works of Ana María Matute, Unamuno, F. García Lorca, J.L. Borges, Pablo Neruda. This course may require more than the standard 4 to 5 hours per week of homework.

60—123 (4871)**Major Works in Spanish and Spanish American Literature**

(4872)

(4873)

Four prepared class periods. Contents vary according to the needs and interests of the student. This course is recommended for native Spanish speakers (with solid writing skills) and students who have completed *Spanish 52*. It may require more than the standard 4 to 5 hours per week of homework.

See also **Latin American Studies (History 49)** listed under *History and the Social Sciences*.

History and Social Science

The study of history and the social sciences provides certain kinds of knowledge, skills, and understanding fundamental to a liberal education. A study of the American past continues to be a prerequisite for a participating citizen in a constitutional republic. Vital though such study is, an understanding of our nation alone is not enough. The examination of other cultures, both European and non-western, is crucial for broadening a student's understanding of an interdependent world. The Department of History and Social Science therefore integrates the study of non-western cultures into courses at every grade level.

To satisfy the diploma requirement, the student must successfully complete four terms of departmental study during the 11th and 12th grades. Most students satisfy this requirement by taking three terms of *United States history* (*History 30-T2 and 31*) and a fourth term of a 40-level social science or 40-level non-western survey.

A student may, however, satisfy the 4th term of the requirement in other ways: (1) by taking *History 34-0* or *History 54-123*, the yearlong AP survey in Modern European History; (2) by taking a 50-level Survey or a 60-level Seminar, IF a student has passed at least two previous terms at the 10-20 level (or the equivalent) and has received permission from the department chair; or (3) for students assigned to *History 29-0* by the HQT, by completing *History 31*.

One of the academic guidelines instituted by the Phillips Academy faculty urges that all 4-year students take "some history" by the end of the Lower year. Accordingly, the department strongly recommends that Juniors take *History 16*, which for them is the prerequisite to other courses in the Western Tradition sequence (*History 17, 18*) and to courses in the Modern World sequence (*History 26, 27, 28*). The department recommends that Lowers take courses in the Modern World sequence (*History 26, 27, 28*), although courses in the Western Tradition (*History 16, 17, 18*) are also open to them.

Exceptional 10th graders have two additional options. If they have completed at least two terms of history/social science, have made an outstanding

score on the HQT, and have received permission from the department chair, then (1) they may take *History 34-0*, the yearlong course in Modern European history; or (2) they may take *United States History* (*History 30-T2 and 31*).

The History Qualifying Test (HQT) is given to Lowers and certain Juniors during spring term and to all new Uppers, Seniors, post-graduates, international students, and some new Lowers during the orientation period in September. The purpose of the test is to place students in the appropriate level of history study: (1) For most students, the HQT indicates that they should begin the 3-term U.S. history sequence (*History 30-T2 and 31*) in September of their Upper year. Students may, however, wait to begin the *History 30* sequence a term later (in January) or a year later (the following September). All these students are reminded that they may elect the fourth term of the requirement only after they have completed one term of the regular *History 30* sequence. (2) The HQT indicates that some students should begin the diploma sequence by taking *History 29-0* and then complete the 4-term requirement by taking *History 31* the following year. (3) For students who have already had a yearlong U.S. history course in the 11th or 12th grade at their previous schools, the HQT indicates how they should complete the 4th term of the requirement. (4) Finally, for students interested in taking *History 30* or *History 34* in the 10th grade, the HQT gives an indication of their chances for success. Either of these two courses counts toward the 4-term diploma requirement.

In all cases, individual placement is made by the Department Chair.

Washington Intern Program

The Department co-sponsors, with the Phillips Exeter Academy History Department, a special Spring Trimester (mid-March through late May) program in Washington for Seniors taking, or who have taken, *History 30-31*, and for Uppers in *History 30*. The program is restricted to a maximum of 15 Andover students and 15 Exeter students, competitively selected, for work as interns in the offices of Senators and Representatives. The application process begins early in

the previous fall trimester. Prospective applicants should avoid taking 0-yearlong courses. Uppers who are interns in the spring will take *History 31* during the fall of their senior year.

Phillips Academy Archives

The Department of History and Social Science encourages the use of the Academy's extensive archival collection. For students who have completed *History 30-31* and are interested in pursuing work with the raw materials of history (including oral history), the Academy archivist offers a unique tutorial-research opportunity on some aspect of the history of Phillips Academy and Abbot Academy. Students undertaking archival study for credit should apply for an Independent Project through the Dean of Studies.

COURSES IN THE HISTORY OF THE WESTERN TRADITION

ive class periods a week. Primarily for Juniors, who are expected to take *History 11* or *16* before taking other courses in the department. Together, *History 16*, *17*, and *18* comprise a survey of Western civilization from earliest times to the beginnings of the modern world. Although the primary goal is familiarity with our western tradition, its institutions and ideas, students will also be introduced to contemporaneous developments in the non-western world. Through the content of these courses, students will work on learning the skills and concepts vital to the study of history, and thus prepare for later, more advanced courses in this field.

11—0 (2110) The Human Experience
This course, part of the Junior Humanities Program, traces the human experience from prehistoric times through the Renaissance. During the fall term, the focus is on the emergence of man, the advent of civilization in the river valleys of the Near East, and ancient Greece. In the winter, medieval times, chiefly in Europe, are studied, and in the spring, the course focuses on the Renaissance and Age of Exploration. While there is substantial attention to content, the course also emphasizes the development of skill, oral and written. Resources include a textbook, supplementary readings from primary and secondary

sources, and visual materials. See p. 6 for a description of the Junior Humanities Program.

16—1 (2161) Ancient History
16—2 (2162)
16—3 (2163)

Following an introductory unit on the nature of history, this course focuses on the course of human development from the prehistoric through the reign of Alexander the Great. Egypt will be studied as an example of early river valley civilizations, but the main focus of the course will be on Greece in the Hellenic and Hellenistic periods.

17—2 (2172) Classical History
17—3 (2173)

This course continues the study of western civilization, concentrating attention on the Roman Republic and Empire, the advent of Christianity, and the rise of Islam.

18—3 (2183) Medieval History
The final course in this sequence will concentrate on the medieval world: its culture, institutions, and legacy. Students will be exposed to such topics as the medieval church, feudalism, the arts, the emergence of nation-states, the origins of the economic revolution, and the background to the Renaissance. While focusing primarily on Europe, considerable attention will also be given to contemporaneous developments in other parts of the world.

COURSES IN THE HISTORY OF THE MODERN WORLD

Four class periods a week. Primarily for Lowers. Together these courses comprise a survey of the modern world from the 14th to the 20th century. In each term, the focus will be on developments in both western and non-western worlds.

26—1 (2261) The Early Modern World
A global perspective on the period 1500-1800. The course will survey developments in Europe and examine contemporaneous developments in Asia, Africa, and the Middle East. Special attention will be given to the interaction between Europe and a variety of non-western cultures during the age of exploration.

27—2 (2272) The World in the Nineteenth Century
A global perspective on the period from 1800 to 1914. The course will survey developments in Europe, Asia,

Africa, and the Middle East, giving special attention to the interaction between cultures in the western and non-western worlds.

28—3 (2283) The World in the Twentieth Century
A global perspective on the period from 1914 to the present. The course will give special attention to the cultures of Asian and African peoples in the contemporary world.

REQUIRED SEQUENCES IN UNITED STATES HISTORY

29—0 (2290) United States History
Four prepared class periods. For Uppers and Seniors so assigned by the HQT. The three terms are designed to cover the same material as *History 30-T2* — there is no increase in coverage. Emphasis is on skills-building. Students receive considerable individual attention, especially in their writing.

Completion of *History 29-0*, together with *History 31* in the senior year, satisfies the 4-term diploma requirement.

30—12 (2304) The United States (T2)
30—23 (2305) (a two-term commitment)
Four prepared class periods. For Uppers, Seniors, and exceptional Lowers. This course, along with *History 31* and an elective at the 40-level, fulfills the four-term history diploma requirement. The first term emphasizes three goals: a survey knowledge of American history through the Civil War by reading an advanced-level text; the acquisition of skills by daily exercises in reading, note-taking, and writing; and an in-depth study of an organizing theme. The second term emphasizes American industrialization from the post-Civil War years to 1941. The goals of the first term continue, but the variety of readings and writings and the complexity of the materials increase.

31—1 (2311) The United States
31—3 (2313)
Four prepared class periods. For Uppers and Seniors. The focus is on the United States, during and after World War II. **Prerequisite:** successful completion of *History 30-T2* or *History 29-0*. For students who opt to write a lengthy research paper as part of this course, the course cannot be made up by passing an examination if the research paper receives a failing grade; instead, the paper will need to be rewritten and receive a passing grade.

Students completing this course who wish to take the College Board Achievement Test should check with their teacher, since extensive review is required.

32—12 (2321) United States History for
(2322) International Students

Four prepared class periods. A course for students for whom English is a second language and whose HQT scores indicate they are not ready for *History 30-T2*. The course emphasizes language skills important to the study of American history and the subject matter focuses on the founding of the republic, constitution building and how the American government works, the westward movement, the Civil War, and the coming of urban-industrial, multiethnic America. The intention of the course is to recognize the special needs of the students and to bring them to a level of achievement so they may transfer to the 30/31 sequence in the winter or spring term, if the students wish to be candidates for the diploma.

SURVEY OF MODERN EUROPEAN HISTORY

34—0 (2340) Modern European History
Four prepared class periods. This course is open to exceptional Lowers (with permission from the department chair) and to Uppers. The course has proven to be good preparation for the Advanced Placement examination in European History. Successful completion of this year-long course, together with a year of United States history (*History 30-31*), satisfies the department's 4-term diploma requirement.

The fall term consists of background survey of the 16th, 17th, and 18th centuries, with particular emphasis on the political, economic, and intellectual revolutions that helped to mold the modern world. The focus of the Winter Term is the period 1800-1914, with continuing attention given to the shaping of modern thought, the emergence of the nation-state, and the effects of industrialism. In the Spring Term, the course covers topics in 20th century Europe: the two World Wars, and their effect; the nature of totalitarianism; the cold war and the rise of the superpowers. Reading is from primary and secondary sources, as well as fiction. Maps and visual materials are used where appropriate. Students are prepared to take the College Board Achievement Test in June.

ELECTIVES: 40-LEVEL SURVEYS IN INTERNATIONAL SOCIAL SCIENCE AND NON-WESTERN HISTORY

Any of these 40-level courses counts as the fourth term of the diploma requirement. **Prerequisite:** A student must have completed at least one trimester of *History 30* or have credit for U.S. history from another school before enrolling in a 40-survey.

SURVEYS IN THE SOCIAL SCIENCES

SS41—1 (2411) Introduction to Economics**SS41—2 (2412)**

Four prepared periods. The course aims to introduce Seniors to the basic principles of economics and their application and relevance to current public policy issues. Students examine the development of the economies of the U.S. and the world, and are introduced to basic theoretical tools which help them analyze important economic issues. Classes consist primarily of discussions, although there will also be some role-playing exercises, computer simulations, class assignments, debates, guest speakers, films, and student reports on their term projects. Students completing this course may take the AP examination in Economics. (Mr. Strudwick, Mr. Webb)

SS42—3 (2423) Urban Studies Institute

Seniors and qualified Uppers may elect for their entire spring course program to participate in a ten-week exploration of the American city, including field work six hours each week. Lawrence, Massachusetts, its history and its present shape, its people and their special problems and opportunities, is the focus of the study, but the context is drawn through investigation of broad historical, social, and economic issues which affect most of urban America. Lawrence has always been an immigrant city, and nearly half of Lawrence's public school students are now of Hispanic background. In addition to their academic course work, students explore a central aspect of urban life by serving as tutors in an intensive English language training program for a group of these Lawrence children; the tutoring program, which will be designed by Institute students and staff, uses dramatization and one-to-one tutoring to strengthen the children's oral and literary skills. Knowledge of Spanish is useful, but not essential.

All students take a course in Latin American History and a course in Urban History, as well as a core course introducing developmental psychology and ethnic studies in such a way as to inform and support the fieldwork project. Students meet periodically in evening seminars with outside speakers.

Seven to nine Phillips Academy students will be selected by interview and special application. Seven to nine students from college preparatory courses in Lawrence High School will be selected in the same way. Apply to Susan M. Lloyd by December 1. Uppers who are USI participants in the spring will take *History 31* during the fall of their senior year. (Mrs. Lloyd, Ms. Piana, Mr. Quattlebaum)

43—2 (2432)**43—3 (2433)****Comparative Government**

Through this course, students gain an understanding of the world's diverse political structures and practices. Students will study general political concepts and compare the governmental systems of such specific nations as Great Britain, the Soviet Union, China, France, Mexico, and Nigeria. In studying these nations, students will examine the political implications of different types of economic and social development.

Topics for class discussion include: the sources of political power; the role of tradition, culture, and ideology in the political process; the relationships between states, citizens, and society; and the process of political change. Students in this course will be able to take the AP examination in Comparative Government and Politics.

44—1 (2441)**44—3 (2443)****International Relations**

This course will introduce the student to international relations by investigating American and non-American perspectives of the world and the study of central concepts of the discipline such as power, influence, war, conflict, and revolution. Additionally the course will examine areas of conflict in Asia, Africa, Central America, and the Middle East, and will analyze the attempts to resolve those clashes. Primary sources, journals, periodicals, and texts will be used. (Mr. Gurry, Mr. Webb)

SURVEYS IN NON-WESTERN HISTORY

45—123 (2451)**(2452)****(2453)****The Russian Experience**

This course, primarily for Seniors, but open to Uppers with the instructor's permission, is a survey of Russian history, literature, and culture from medieval times to the present. In the Fall Term, the focus is on the development of ideas and institutions in Old Russia and the Imperial period, through much of the 19th century. In the winter, the subject is Russia in Revolution, covering the period 1880-1930, and in the spring attention is given to the Soviet Union over the last half-century. While any of these terms may be taken alone, students are urged to consider taking all three terms, since the course is taught as a whole, with the second and third terms building on the previous ones to develop the key themes in Russia's past and in particular to address the question of why Russian society has never developed the kind of democratic institutions with which we are familiar. Considerable attention is given to the study of literature. The course examines the significant events and ideas of the Russian past and the reflection of these events and ideas

in the fiction and memoirs of authors such as Pushkin, Gogol, Turgenev, Dostoevsky, Tolstoy, Chekhov, Gorky, Mayakovsky, Blok, Zamiatin, Babel, Mandelstam, Bulgakov, Solzhenitsyn and Ratushinskaya. (Mr. Richards)
See also Russian 13 in the Foreign Language section.

46—123 (2461) Asia: China, Japan, and India
(2462)
(2363)

Four prepared class periods. The fall term focuses on *Modern China*. After an introduction to traditional China's religions, thought, and institutions, the course concentrates on events since 1800, emphasizing China's response to the West, and economic, intellectual, and political developments through the rise of communism in the 20th century. The course will also analyze the origins and aftermath of the Cultural Revolution and China's current relationship with the rest of the world.

The Winter Term emphasizes *Modern Japan*. Today Japan has impressed many outsiders as a uniquely homogeneous, unified, and economically effective society. This course — through an examination of the evolution from traditional to modern Japanese society — will examine the validity of that perception. After an introduction to traditional thought and feudal social structure in Japan, the course looks closely at ideas, events, and developments since 1800. Readings are from historical texts, contemporary observers, sociological descriptions, and literature, with a special effort to understand the outstanding features of Japanese culture, politics, and economics.

The focus of the Spring Term will be on *Modern India*. The course will examine India's rich cultural traditions and see how Indian society was affected by the intrusion of British imperial rule in the 19th century. In-depth attention will be given Gandhi, the movement for Indian independence, and an examination of India's literature and politics in the context of the world today.

47—3 (2473) Africa and the World

This course focuses on contemporary issues facing the new nations of Africa, based on an historical analysis of the emergence of Africa from the colonial period. Political and economic development of these countries, the relations between developed and developing states, the emergence of majority rule in southern Africa, and the role of Africa in the United Nations is studied. Readings include analyses of the issues African nations confront in the modern world, novels about Africa, and speeches and articles by African leaders.

48—1 (2481) The Middle East

Four prepared class periods. Few if any regions of the world claim a more compelling interest than the Middle East. From its ancient site of half the earth's cultural antecedents, birthplace of three world religions, land bridge

of three continents, eternal East-West corridor, and ceaseless crossroads of conquerors, pilgrims, and tradersmen, the Middle East derives a distinctive character of its own. This course traces the region's history from the Arab awakening to the present situation.

49—123 (2491) Latin American Studies
(2492)
(2493)

Four prepared class periods. This course is a survey of Latin American civilization seen through its history, literature, and culture from pre-Columbian times to the present. In the Fall Term, the focus is on the Mayan, Aztec, and Inca civilizations, the Spanish Conquest, and the development of present day institutions and cultural patterns in the Iberian Colonial period. In the Winter Term, the students learn about Latin America's independence from Spain and Portugal, the republican experiment, the role of the military, the Church, the Oligarchy, and the function of class, sex, and race in Latin American societies. In the Spring Term, the subject is political movements and revolutions of the 20th century, including the Mexican, the Cuban, and Sandinista Revolutions. US-Latin American relations are an important component of the course in this term.

Each term can be taken independently, but students should consider taking all three terms since the course as a whole develops themes prevalent in Latin American history — in particular, the struggle against dictatorship, economic and social divisions, imperialism, and population growth. Films, and literary works of writers such as Garcia Marquez, Fuentes, Asturias, and Neruda, will be used to understand how Latin Americans view their own reality. (Ms. Piana)

ELECTIVES: 50-LEVEL SURVEYS

The following 50-level surveys are open to Seniors and Uppers who have completed at least one term of *History 30*. A student may elect a 50-level survey together with or prior to satisfying the 4th term of the diploma requirement at the 40-level. Completion of three consecutive terms of *History 54* or *History 55*, together with three terms of *History 30-31*, satisfies the department's diploma requirement.

54—123 (2541) Modern European History
(2542)
(2543)

This course is identical in content to *History 34-0*. It is different in that it is open only to Uppers and Seniors who

have completed at least one term of *History 30* and it may be elected for a single term.

55—123 (2551) **Ancient History**
(2552)
(2553)

Four prepared class periods. The course is concerned with Greek and Roman history from the Minoan Period to the beginning of the Medieval Period. Each term represents a coherent and independent unit. In the Fall Term the survey ends with the world empire of Alexander the Great. The Winter Term covers the period from the beginning of Rome until its transition from Republic to Empire. The Spring Term is concerned with the Roman Empire and the transition from Roman to Medieval History. (Mr. Krumpke)

ELECTIVES: 60-LEVEL SEMINARS

These 60-level electives are *seminars* for Seniors. Issue-oriented trimester courses, they meet three hours a week, with an expectation of substantial independent reading and writing. For effective discussion, they are limited to 14 students. **Prerequisite:** either (1) prior or concurrent completion of the 4-term diploma requirement; or (2) permission from the department chair.

SEMINARS IN THE SOCIAL SCIENCES

SS61—3 (2613) **Issues in Economics**

Prerequisite: Successful completion of *Social Science 41*. This seminar investigates public policy issues in the field of economics. Students begin by studying the history of economic thought, relating it to our understanding of economic development. After examining the works of Adam Smith, John Stuart Mill, Karl Marx, Alfred Marshall, and John Maynard Keynes, the class addresses a series of current policy questions, such as the debates over the budget, tax reform, import restriction, supply-side economics, central economic planning, labor organization, national industrial policy, and the ethical responsibilities of business. Classes center around discussion of the assigned readings. A term paper on an issue of choice is required. There is no final examination. (Mr. Strudwick)

SS62—2 (2622)

American Race Relations

This seminar investigates the development of racial attitudes in the United States. We discuss contemporary campus attitudes and examine how current concerns have evolved historically, studying the origins of racism in the British colonies, antebellum slavery in the American South, antislavery movements and anti-ethnic restrictions in the North, plus the urban migration of blacks and the life of Jim Crow in the 20th century. We look closely at the movement for civil and economic rights during the 1960s and give substantial attention to recent issues—how to reconcile assimilation with separation, Birmingham with Boston, *Brown* with *Bakke*, equality of opportunity with equality of result. A final paper is expected; there is no final exam. (Mr. Rogers)

SS64—2

Men, Women, and American Culture

(Not offered in 1990-91.)

This seminar is designed to help students understand the experiences of men and women in American culture from the Victorian age to the present. Using interdisciplinary materials from social and intellectual history, psychology, anthropology, and literature, this course will explore how American culture has defined its ideals of masculinity and femininity since the mid-nineteenth century. We shall study a variety of topics: Victorian sexuality; gender roles on the frontier; the "cult of true womanhood"; moral reform in the Progressive Era; manliness and the Strenuous Life; gender roles in the Roaring Twenties; the family and the Great Depression; the return of domesticity in the Fifties; and the pros and cons of the Women's Liberation Movement. The course will include lectures, films, discussion, guest speakers, exams, and several papers. Reading will include Peter G. Filene's *Him/Her Self: Sex Roles in Modern America*, and other books and articles. (Ms. Dalton, Mr. Rotundo)

SS65—2 (2652)

Nuclear Weapons — Proliferation and Responses

This seminar follows the evolution of and reaction to The Bomb — from the discovery in 1938 of fission on Otto Hahn's table in Nazi Germany, to Hiroshima, the Cuban Missile Crisis of 1962, and the START Talks and cruise missiles and President Reagan's "Star Wars" speech in the 1980's. Historians, chemists, physicists, political scientists, and journalists are among those who tell the story, in lectures, documents, and secondary accounts. Readings include Richard Rhodes, *The Making of the Atomic Bomb*; Robert F. Kennedy, *Thirteen Days*; McGeorge Bundy, *Danger and Survival*; John Newhouse, *War and Peace in the Nuclear Age*; and Graham T. Allison et al., *Hawks, Doves, and Owls*. The course entails class discussions, field trips, films, readings, a research project, and a final exam. (Mr. Quattlebaum)

SEMINARS IN HISTORY

66

The Renaissance

(Not offered in 1990-91.)

Three prepared class hours plus one two-hour studio. An interdisciplinary course open to seniors, exploring the history and culture of the European Renaissance. Emphasis will be on the manner in which economic and social developments converged in Italy to stimulate a synthesis of classical and then-modern cultures, a synthesis which took on fresh shape wherever in Europe it rooted itself. In addition to reading and listening assignments in history, music, and literature, students will be introduced at appropriate levels of skill to the arts that every educated Renaissance youth was expected to master: perspective drawing, the making of music, and the writing of verse, for example. There will be periodic slide lectures tracing the history of Renaissance painting, sculpture, and architecture, and the gathering revolution in scientific thought. All students will complete a 15-page research paper on a topic of their own choosing. There will be no final exam.

67—3 (2673)

Victorian England: England in an Age of Expansion

This seminar is devoted to a study of the major transitions and developments of nineteenth century Britain. It is divided into three central components: economic and social developments; political movements; and international relations. Since Victorian literature more directly reflects the life and thought of the times than that of any other period of English history, the course includes an examination of those writers whose works were influential in either adapting or describing the minds and institutions of the English people to the changing conditions of the period. These writers include Hardy, Dickens, and Marx. A term paper is expected; there is no final examination. (Mr. Richards, Mr. Strudwick)

68—2 (2682) **The Courts and Individual Liberty and Equality Under Law**

This seminar focuses on the often conflicting rights of individuals and the interests of society as confronted by the courts in the years 1937-1990. Cases studied include: The role of the courts and the establishment of judicial standards in cases of speech, press, and religion; search and seizure; those accused of crimes; students; and equal protection in voting, education, employment, and housing regardless of race, class, or gender. In the past few years the seminar has given particular attention to the issues of privacy and affirmative action. The seminar uses the case method with readings from Kutler's *Supreme Court and the Constitution* and a book of excerpts from briefs of cases before the Supreme Court prepared by

Gilbert and Lyons. The basic classroom procedures are Socratic dialogue and roundtable discussion. The course concludes with each student's participation as justice, lawyer, or clerk in a moot court on a case argued before but not yet decided by the US Supreme Court (in 1990, the case was *Cruzan v Missouri* - ["right" to die]; in 1989, *Webster v Human Reproductive Services* - [abortion]). (Mr. Lyons)

Mathematics

The mathematics curriculum is built around a core sequence of eight trimester courses: three of elementary algebra, two of geometry, one of intermediate algebra and two of precalculus topics. The completion of these eight trimesters will satisfy diploma requirements, but an additional trimester is required before entering the calculus. Placement of new students in the appropriate first course is made by the department considering the record in previous schools, the results of a self-administered diagnostic test in elementary algebra which is sent to newly admitted students in the Spring, and the course program chosen by the entering student. Examinations to validate first and second year algebra skills are given early in the Fall trimester, at which time students who are incorrectly placed can be shifted to higher or lower level courses.

Students entering with no prior study of algebra start with *Mathematics 10*; those with a partial year of algebra enter *Mathematics 15*. Students entering with a full year of algebra start with *Mathematics 21-1*. If the results of placement testing indicate a need for *Algebra Review*, then students who have not taken geometry start with *Mathematics 19-1* and continue to *Mathematics 21-2*.

New students who have taken one year of elementary algebra and one year of geometry will satisfy diploma requirements by taking *Mathematics 32-1*, *34-2* and *35-3*. Those with a strong background in intermediate algebra may enroll directly in *Mathematics 34-1*. If, on the basis of our testing, the stu-

dent's algebra skills are weak, then *Mathematics* 25-12 may be required before precalculus.

It is generally best to take the College Entrance Examination Board Achievement Test (Level II) in *Mathematics* near the end of or immediately following *Mathematics* 36.

For students who wish to go beyond the required level, the department offers many electives, some of which lead up to and beyond the Advanced Placement Calculus Examinations of the College Board.

The standard sequence of mathematics electives starts with *Math* 36 (trigonometry) and goes through the normal five-term calculus sequence of *Math* 53 and *Math* 54. Some students might also include *Math* 48 and/or *Math* 41 in their "normal" sequences; others might do the Honors sequence and others might do only the *Math* 51-52 calculus sequence.

Hand Calculators

Every student taking *Mathematics* or *Physical Science* must have a suitable hand calculator capable of handling square roots, sines, cosines, reciprocals, logarithms and exponents. Any calculator with *sin*, *log* and inverse function keys is adequate for most course use, though graphing calculators (e.g., Casio fx-7000 series or its equivalent) are especially recommended.

COURSES LEADING TO SATISFACTION OF THE DIPLOMA REQUIREMENT:

10—0 (3100) Elementary Algebra
Five prepared class periods. A year-long course for students who have had little or no algebra. Stress is placed on an understanding of the elementary structure and language of the real number system, on the manipulative skills of simplifying expressions and solving first and second degree equations, and on the study and graphing of polynomial functions. Work is done with word problems, inequalities, irrational numbers, and right triangle trigonometry. **Prerequisite:** None.

15—12 (3154) Elementary Algebra (T2)
(a two-term commitment)
Five prepared class periods. A two-term course for those new students whose knowledge and skills are not strong enough to enter the one-term *Algebra Review* or *Geometry*. **Prerequisite:** A half to a full year of algebra.

19—1 (3191) Algebra Review
Five prepared class periods. A course for students who enter with a full year of algebra whose knowledge and confidence indicate they need a brief review of algebra. **Prerequisite:** A full year of algebra.

21—1 (3211) Geometry
21—2 (3212)
21—3 (3213)

Five prepared class periods. A course for students who have had a strong ninth grade algebra course, but little or no geometry. This course is a thorough and systematic presentation of standard synthetic Euclidean geometry. Emphasis is placed on the need for precision and clarity in the writing of formal proofs. **Prerequisite:** A complete course in elementary algebra and good algebraic skills.

22—1 (3221) Geometry
22—2 (3222)
22—3 (3223)

Five prepared class periods. This course continues the work of *Math* 21, with increased emphasis on the algebraic/numerical aspects of geometry. **Prerequisite:** *Mathematics* 21.

25—12 (3254) Algebra Consolidation (T2)
(a two-term commitment)

Five prepared class periods. A course for students with one year of algebra and one year of geometry, whose algebra skills are not strong enough for placement in *Mathematics* 32 or 34. The course begins with a comprehensive review of elementary algebra, and concludes with topics in intermediate algebra (as listed in the course description of *Mathematics* 32). Students who do satisfactory work in this course enter *Mathematics* 34 in the Spring. Students with a (T2) grade of 2 or lower in *Mathematics* 25-12 enter *Mathematics* 32-3 in the Spring.

31—0 (3310) Geometry and Precalculus
Five prepared class periods. A yearlong course for extremely able entering students who have completed with distinction an Algebra 2 course but have not completed a yearlong geometry course. The course covers Euclidean geometry (both synthetic and coordinate) and elementary functions (including polynomial, exponential and logarithmic functions). This course completes the diploma requirement and prepares students to enroll in *Mathematics* 36. **Prerequisite:** Credit for one year of elementary algebra and one year of intermediate algebra.

- 32—1 (3321) **Intermediate Algebra**
 32—2 (3322)
 32—3 (3323)

Five prepared class periods. Topics in intermediate algebra, including sets; properties of real numbers; factoring; fractional and negative exponents; radicals; absolute value; solutions of linear, quadratic, and radical equations and word problems. **Prerequisite:** *Mathematics 22*, or its equivalent.

- 34—1 (3341) **Precalculus**
 34—2 (3342)
 34—3 (3343)

Five class periods, four prepared and one unprepared. More topics in intermediate algebra, including quadratic inequalities, equations of lines and circles and tangents to parabolas. The emphasis of the course is upon functions and their graphs, on the composition of functions and their applications. **Prerequisite:** *Mathematics 32*, or its equivalent.

- 35—1 (3351) **Precalculus**
 35—2 (3352)
 35—3 (3353)

Five class periods, four prepared and one unprepared. A continuation of the study of functions, including polynomial, exponential, and logarithmic functions. Completion of this course satisfies the diploma requirement. **Prerequisite:** *Mathematics 34* or its equivalent.

Entering Seniors whose prior work has not satisfied the diploma requirements must complete *Math 39-12* (T2) or *Math 40-1* or a term of calculus.

- 39—12 (3394) **Elementary Functions I and II (T2)**
 (a two-term commitment)
 (formerly *Math 40-12* (T2))

Five prepared class periods. A course for entering Seniors who need to satisfy the diploma requirement in mathematics. The course includes a review of the fundamentals of algebra, analytic geometry of lines and circles and extensive work with elementary functions. Strong emphasis is placed on graphing and on the use of graphs as an aid in problem solving. The Winter Term focuses on polynomial, exponential, logarithmic and trigonometric functions and their applications. **Prerequisite:** Credit for three years of high school mathematics.

- 40—1 (3401) **Elementary Functions II**
 Five prepared class periods. A course primarily for entering Seniors who need to satisfy the diploma requirements in mathematics but who do not need the two-term *Math 39-12*. The course is comparable to the Winter

Term of *Math 39-12* and focuses on functions and their applications, including polynomial, exponential, logarithmic, circular and trigonometric functions. Strong emphasis is placed on graphing and the use of graphs as an aid in problem solving. **Prerequisite:** Credit for three years of high school mathematics or permission of the Department.

ELECTIVE COURSES

Only courses with sufficient enrollment will be given.

- 36—1 (3361) **Precalculus - Trigonometry**
 36—2 (3362)
 36—3 (3363)

Five class periods, four prepared and one unprepared. This is the standard course in circular and trigonometric functions with applications. It is required for those wishing to go on to *Mathematics 48* or the calculus. **Prerequisite:** *Mathematics 35*, or its equivalent.

Math 41, 42, 47 and 48 are non-calculus electives which may be taken either before beginning a calculus course or as alternatives to the calculus. Of these four courses, *Math 48* is the natural extension of the *Math 34, 35, 36* precalculus sequence, developing earlier work more deeply and strengthening a student's command of algebra and trigonometry. *Math 41, 42 and 47* are courses in non-continuous, discrete mathematics, an area of growing importance which is quite different from the precalculus/calculus sequence.

- 41—1 (3411) **Probability**
 41—2 (3412)
 41—3 (3413)

Four prepared class periods. Includes sample spaces, counting problems, sampling, conditional probability, random variables, expected value, variance, standard deviation, binomial and normal distributions. The computer is used on applications that are too time-consuming to perform by hand and to simulate experiments for which there is no model. **Prerequisite:** *Mathematics 35* or its equivalent.

- 42—3 (3423) **Statistics**
 Four prepared class periods. Applications of various distributions, hypothesis testing, statistical inference and data organization. **Prerequisite:** *Mathematics 41*.

47—2 (3472) Discrete Mathematics
 Four prepared class periods. This course provides exposure to some topics from the areas of discrete mathematics and finite mathematics such as mathematical induction, sequences, series, recursion, networks, circuits, annuities, amortization of loans, and fractal geometry. **Prerequisite:** *Mathematics 36* or its equivalent.

48—1 (3481) Analytic Geometry
48—2 (3482)
48—3 (3483)

Four prepared class periods. This course is an extension of earlier work on lines and curves in the plane. It will include extended locus problems and further study of the conic sections: parabolas, ellipses and hyperbolas and their simple rotations. The course will include an introduction to the algebraic description of 3-space: vectors, curves, planes, simple surfaces and their intersections. **Prerequisite:** *Mathematics 36* or its equivalent.

50—23 (3505) Beginning Calculus (T2)
 (a two-term commitment)

Four prepared periods. This course, for Seniors only, does not specifically prepare for the Advanced Placement Examination. The approach to calculus is concrete, informal and applied, as opposed to abstract, deductive and theoretical. Topics include applications of the derivative and integral to problems of optimization, curve sketching, rate of change, area, volume, and work. Techniques will be developed to apply derivatives and integrals to logarithmic, exponential, trigonometric and inverse functions. **Prerequisite:** *Mathematics 36* or an equivalent course in trigonometry and elementary functions.

51—1 (3511) AB Calculus (I)
 Five prepared class periods. Primarily for Seniors, but open to Uppers who choose not to do the standard Mathematics 53-54 calculus sequence. The first of a three term sequence that covers the syllabus for the AB Advanced Placement Examination of the College Entrance Examination Board. Topics covered include: review of functions and graphing, limits and continuity, the derivative and its applications. **Prerequisite:** *Mathematics 36* or its equivalent.

52—23 (3525) AB Calculus (II) (T2)
 (a two-term commitment)

Five prepared class periods. This is a continuation of *Mathematics 51* and finishes the AB Advanced Placement Syllabus. Topics covered include: the definite integral, techniques and applications of integration, and the Fundamental Theorem of the Calculus. **Prerequisite:** *Mathematics 51*.

53—23 (3535) BC Calculus (I) (T2)
 (a two-term commitment)

Four prepared class periods. This is the beginning of the normal five-term calculus course recommended for non-Seniors, though it is open to Seniors as well. With *Mathematics 54* it covers the syllabus of the BC Advanced Placement Examination. Topics covered in the two terms include some differential and some integral calculus: limits, continuity, derivatives, The Chain Rule, related rates, The Mean Value Theorem, applications of integrals and The Fundamental Theorem of the Calculus. **Prerequisite:** *Mathematics 36* or its equivalent.

54—1 (3541) BC Calculus (II)
 Five prepared class periods. This course continues the work of *Mathematics 53-23* in preparation for the BC Calculus Examination. Topics covered include further application of the integral calculus, volumes and arc length. **Prerequisite:** *Mathematics 53* or its equivalent.

54—23 (3545) BC Calculus (II) (T2)
 (a two-term commitment)

Five prepared class periods. A continuation of *Mathematics 54-1* finishing the syllabus for the BC Advanced Placement Examination in May. Topics covered include: further techniques of integration, numerical approximations, infinite series, parametric equations and further differential equations. **Prerequisite:** *Mathematics 54-1* or its equivalent.

55—0 (3550) Honors BC Calculus
 Five prepared class periods. A yearlong course in analytic geometry and calculus which begins only in the Fall. Enrollment is limited to very able and committed mathematics students. Satisfactory completion of this course prepares for the College Board BC Advanced Placement Examination. This course may require more than the standard 4 to 5 hours per week of homework. **Prerequisite:** *Mathematics 36* or its equivalent, and departmental permission.

63—123 (3631) Honors Mathematics Seminar
 (3632) (formerly *Math 68-123*)
 (3633)

Each term's seminar will be devoted to one topic which will be developed in depth. The term's topic will be announced the previous term and might be: Numerical Methods and Approximations; Non-linear Dynamical Systems - Instability, Chaos and Fractals; Abstract Algebra - Groups, Rings and Fields; Mathematical Models in the World Around Us; Number Theory. Participants need to be prepared to work on one topic in great detail and, in some seminars, to work as part of a team on the solution of problems. **Prerequisite:** *Mathematics 54-1*, three terms of calculus, or departmental permission.

65—1 (3651) Calculus of Vector Functions
Four prepared class periods. For students of demonstrated ability and interest. Vectors, lines and planes in space and an introduction to linear algebra including matrices, Gaussian eliminations, vector spaces and eigenvectors. **Prerequisite:** *Mathematics 54*, or *Mathematics 55* or departmental permission.

65—23 (3655) Calculus of Vector Functions (T2)
(a two-term commitment)
Four prepared class periods. A continuation of *Mathematics 65-1* covering functions of many variables, partial differentiation, gradients, vector valued functions, multiple integration and its applications, line integrals and Green's Theorem. **Prerequisite:** *Mathematics 65-1*.

COMPUTER COURSES

The Mathematics Department is located in Morse Hall, which also houses two computer labs. One lab has 16 IBM Personal Computers (networked); the second contains 7 Apple IIe microcomputers. A variety of computer courses is offered that range from an introduction to computers to preparation for the Advanced Placement Examinations in Computer Science. Computer languages taught include LOGO and Pascal.

Students who desire an introduction to computer programming but who have little or no computer experience normally enroll in *Computer 20* or *Computer 30*. Those who feel confident about their ability to work independently as they learn to program or who expect to enroll in higher level computer courses should choose *Computer 30*. Those who desire an overview of computing as they learn to program or feel that they need more interaction with the computer during class should choose *Computer 20*.

Computer	Computer Competence (LOGO)
20—1 (3821)	
20—2 (3822)	
20—3 (3823)	

Four prepared class periods. A one-term course in *programming* in the LOGO language for students with little or no previous experience with computers. The course focuses on some of the important applications of computers: graphics, word processing, and data management. Topics are introduced with commercial software

packages. Then students design and program simplified versions of these packages. Design skills and user-friendly programming are stressed. This course does not qualify a student for *Computer 40* or *50*. **Prerequisite:** None. Not open to students from *Computer 30*.

Computer	Beginning Computer (Pascal)
30—1 (3861)	
30—2 (3862)	
30—3 (3863)	

Four prepared class periods. An introduction to structured programming using the Pascal language. The course introduces programming methodology and its problem solving techniques along with the basic forms of Pascal. Students will learn to write programs of moderate length and to use the program development system. This course qualifies a student for *Computer 40* or *Computer 50*. **Prerequisite:** *Mathematics 22* (Geometry).

Computer	Intermediate Computer (Pascal)
40—2 (3902)	
40—3 (3903)	

Four prepared class periods. For students with programming experience in Pascal. The course continues the practices and disciplined approach to problem solving introduced in *Computer 30*. Various standard algorithms such as searching and sorting will be introduced. The syllabus will be guided by the course description of the A Advanced Placement Examination in Computer Science. **Prerequisite:** *Computer 30* or permission of the department.

Computer	Computer Science
50—1 (3951)	

Five prepared class periods. The first term of a yearlong course in algorithms and data structures using primarily the Pascal language. The emphasis will be on programming methodology and some standard algorithms. The curriculum will be guided by the course description of the College Board AB Advanced Placement Examination in Computer Science. This course may require more than the standard 4 to 5 hours per week of homework. **Prerequisite:** *Computer 30* or permission of the department.

Computer	Computer Science (T2)
50—23 (3955)	(a two-term commitment)

Five prepared class periods. Continuation of *Computer 50—1*. The emphasis will be on data structures and larger programs. This course completes the preparation for the AB Advanced Placement Examination in Computer Science. This course may require more than the standard four to five hours per week of homework. **Prerequisite:** *Computer 50—1*.

Music

The diploma requirement in Music for entering Juniors and Lower Middlers is one trimester of music, which is satisfied by *The Nature of Music* (Music 20, 21 or 22). This course is also a prerequisite for courses in the History and Appreciation and the Theory categories, but is not a prerequisite for the Applied category. Entering Upper Middlers must take a trimester course in Music or Art at the Academy: *Music 20* or its equivalent.

Entering Seniors need not take a Music course. Exemption from *Music 20* as a prerequisite is granted on the basis of an exam and/or by permission of the department chairman. However, there is no exemption for the Music diploma requirement.

See also **The Renaissance** (History 66) in the listings of History and the Social Sciences.

APPLIED

15—123 (6151) (6152) (6153) **Fidelio Society**

Pass/Fail. Three prepared periods. Open to all classes. This small group of mixed voices is selected from the *Chorus* (Music 17). It performs on numerous occasions throughout the year both on *Chorus* programs and on its own. Its repertoire includes music of all types, early and modern, sacred and secular. Membership is by audition and is conditional upon good standing in the *Chorus*. This course, if failed, cannot be made up by examination.

16—123 (6161) (6162) (6163) **Band**

Two double periods. Open to all qualified students. Tryouts are held any time before the beginning of a term to test the student's ability and to arrange for seating. There are some school-owned instruments available for student use. All types of music for wind ensemble are rehearsed. It includes marches as well as classical, popular, and show music. Much sight reading is done, and at least one public concert per term is given. This course, if failed, cannot be made up by examination.

17—123 (6171) (6172) (6173) **Chorus**

Two double periods. Open to all qualified students. The *Chorus* is the Academy's major singing group, comprised of mixed voices, and performs a variety of choral works, both sacred and secular. No previous choral experience is necessary; just a desire to work hard and enjoy a unique choral experience. This course, if failed, cannot be made up by examination.

18—123 (6182) (6183) **Chamber Orchestra**

Two double periods. Open to all classes. Most of the music played is for string orchestra; the best winds in the school are invited to join for larger works. While *Chamber Orchestra* may be elected as a credit-bearing course, it is also an activity in which all are invited to participate. This course, if failed, cannot be made up by examination.

19—123 (6191) (6192) (6193) **Private Instrument and Vocal Lessons**

Two class meetings plus required concert attendance. Lessons are available on all orchestral instruments including, in addition, piano (classical or jazz), guitar, saxophone, organ, harpsichord, carillon, and voice.

In addition to practicing daily, the credit students are expected to meet the following commitments: 1) a once per week meeting with their private instructor; 2) a once per week seminar, providing a broader practical/theoretical background; (credit students would be assigned seminar groups according to their instrument and background); 3) a required attendance of three concerts, on campus, per term.

There is a charge of \$270 per term for half-hour instruction, or \$360 per term for full-period (45 minute) lessons, and a nominal fee for use of practice pianos and organs. Orchestral and band instruments are available for rental. NOTE: Beginners (as defined by the department) **MUST** take two consecutive terms of *Music 19* if they are enrolled as credit students. This course, if failed, cannot be made up by examination.

20—1 (6201) 20—2 (6202) 20—3 (6203) **The Nature of Music**

Five prepared class periods. This course is designed to give a general background in history, theory, and practical aspects of music. Music from its earliest sources to the present is examined. Also, the role of music and the arts in each of its cultural stages is studied. Students receive some first hand experience with musical instruments. No previous experience in music is required.

- 21—1 (6211) **The Nature of Music (for Juniors)**
 21—2 (6212)
 21—3 (6213)

This course covers the same material as Music 20 (see above), but is designed specifically for those Juniors whose verbal and writing skills may be weak. Juniors with no such demonstrated weaknesses may take Music 20.

- 22—2 (6222) **Nature of Music —Advanced/**
 22—3 (6223) **Chamber**

Five class periods. An alternative course to *Music 20* for advanced music students with proficiency on their individual instruments. Students will study musical styles, periods, and literature through in-class performance, analysis, and discussion of chamber music. Homework will consist of practicing individual parts, listening to recorded performances, and studying scores. The course aims not only to encourage chamber music performance, but also to prepare students for the Music Listening and Literature Advanced Placement Examination in May. **Prerequisite:** Permission of the Department. (If a student intends to take the A.P. in Listening and Literature, he/she is strongly advised to take *Music 33* as well as *Music 22*.)

HISTORY AND APPRECIATION

The Nature of Music (Music 20, 21 or 22) is a **prerequisite** for all courses in this section.

- 26—23 (6262) **Seminar in the History of Music**
 (6263)

Two class meetings. Open to Lower and Upper Middlers and to Seniors. This course, taught in seminar fashion, is one where a great deal of reading, listening, and analysis is expected to take place outside the classroom. The composer or composers and era to be studied each term will be decided by the class and the instructor. (Sample topics: Beethoven and the Era of Revolution; The Life, Times and Music of J.S. Bach.) Hours to be arranged.

- 27—123 (6271) **Independent Study in the History**
 (6272) **and Literature of Music**
 (6273)

Four prepared class periods. Open to Upper Middlers and Seniors. A student who has taken at least one trimester of *Music 26* may, with the permission of the instructor, pursue an independent course of study in either a particular type of music or a particular period of music.

- 28—3 (6283) **Jazz**

Four prepared class periods. Open to Upper Middlers and Seniors. A study of the history of classic jazz, dating back to its roots in Africa, its development in New Orleans, its spreading to New York and Chicago, and its influence on music today. A survey of ragtime, blues, Dixieland, fox-trot, on through the big band era of the thirties, concluding with the jazz rock of today. A study of the influence and contributions of the major personalities such as W.C. Handy, Jelly Roll Morton, Louis Armstrong, Basie, Whiteman, Gershwin and the rest of the greats.

- 29—3 (6293) **Opera**

Four prepared class periods. A study of perhaps the richest of all musical genres and one which lends itself to discussion and analysis. The course will focus, after a brief survey, on four major operas from different periods: typically Baroque, Classical, Romantic and modern. Study will be made of the text, in translation, if necessary, the composer's style, the special relationship between words and music and the background to a performance. Selection will be based on which operas are being performed in Boston and what is available on film or video.

THEORY

The Nature of Music (Music 20, 21 or 22) is a **prerequisite** for all courses in this section.

- 32—23 (6322) **Conducting**
 (6323)

Hours to be arranged. Open to Upper Middlers and Seniors. A course in conducting and basic musicianship. This course is designed to give the student an introduction to the conductor's world through developing conducting skills and score analysis.

- 33—1 (6331) **Theory of Music I**

Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors. This course offers an introduction to harmonic progression, triads, modes, rhythmic coordination with dictation. Some original work is also expected.

- 34—2 (6342) **Theory of Music II**

Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors. Prerequisite: Theory of Music I or permission of the instructor. This course deals with harmonic progressions, modulations, figure bass, and an introduction to counterpoint and harmonic analysis.

35—3 (6353) Theory of Music III
Four prepared class periods. Open to Lower Middlers, Upper Middlers, and Seniors. **Prerequisite:** *Theory of Music II* or permission of the instructor. This course includes advance figure bass, more complex chords, and a brief introduction to nineteenth and twentieth century techniques.

36—1 (6361) Electronic Music
36—2 (6362)
36—3 (6363)

Four prepared class periods. **Prerequisite:** *The Nature of Music (Music 20)* or permission of the Department Chairman. A course for the benefit of those who seek to expand their domains of creativity by understanding and utilizing the conceptual approaches inherent in electronic music synthesizers and related equipment. Using a practical approach, the course begins with the care and feeding of the tape recorder and proceeds to the functioning and operation of electronic music modules. A lab fee of \$15.00 is charged for the use of the synthesizer.

40—123 (6401) Advanced Techniques in
(6402) Electronic Music
(6403)

Four prepared class periods. **Prerequisite:** *Electronic Music (Music 36)*. A course designed for the continuation of the skills and techniques developed in Music 36. A lab fee of \$15.00 is charged for the use of the synthesizer.

Philosophy and Religious Studies

The Department seeks to initiate students into three distinctive human quests: the search for meaning, the search for justice and the search for the foundation of knowledge. The process of initiation is intended not only to provide an introduction to outstanding literature in the field but also to assist the student in effecting a personal appropriation of the search and in developing the necessary skills for its pursuit. Active class participation is an essential part of this process. **Hence failed courses usually cannot be made up by examination alone.**

The department diploma requirement is successful completion of any one-trimester course; this re-

quirement applies only to those who attend Phillips Academy for three or four years. Courses are offered at a variety of levels. All courses involve four prepared class periods.

20—3 (7203) The Biblical World View: An Introduction

Four prepared class periods. Open to Juniors and Lower Middlers. Why was the world created? Why are we humans placed on this earth? What are we like? What should we try to achieve in life? How should we treat one another, other creatures, and the planet on which we live? For many centuries the Bible provided for many people a response to such questions. In our day, however, the message has become both unclear and increasingly unfamiliar. In this course we shall look at the composition and the historical setting of the Bible (Old Testament), then read selected passages of Biblical narrative and reflection which introduce persons and principles central to the Biblical view of the world, its inhabitants, and its Creator. (Rabbi Gendler)

21—1 (7211) Introduction to Ethics:
21—2 (7212) Discernment and Decision
21—3 (7213)

Four prepared class periods. Open to Juniors and Lower Middlers. Beginning with concrete moral dilemmas and drawing case studies from literature, bioethics and education, this course provides an introduction to ethical reasoning. Specific attention is paid to the thinking of one classical philosopher (Socrates) and one modern utilitarian (Peter Singer).

23—1 (7231) The New Testament Perspective
Four prepared class periods. Open to Juniors and Lower Middlers. The course will consider, in their cultural and historical context, the person and teaching of Jesus of Nazareth, the development of the early Christian community and the religious claims of that community concerning the Christ. (Fr. Gross)

24—2 (7242) Religious Discoverers
Four prepared class periods. Open to Juniors and Lower Middlers. The experiences of a handful of individuals have exerted an extraordinary influence on the life of the world. These individuals can be called religious discoverers, each of whom has forged a vision of how life should be lived, that persons, communities and whole cultures have found compelling for a thousand years or more. We will examine three such discoverers: Jesus, Moses and Buddha. We will study how their lives have provided exemplary models for living for the religious traditions they represent. (Ms. McCaslin)

30—1 (7301) **Introduction to Non-Western**
 30—2 (7302) **Religions**
 30—3 (7303)

Four prepared class periods. Open to Lower and Upper Middlers and Seniors. This course provides a brief introduction to four of the world's major religions: Islam, Hinduism, Buddhism, and Taoism. Huston Smith's classic, *The Religions of Man*, is the text. Additional readings are drawn from basic religious texts of the traditions. (Ms. McCaslin and Rabbi Gendler)

32—2 (7322) **Post-Biblical Jewish Thought:**
Responses to the Holocaust

Four prepared class periods. Open to Lower and Upper Middlers and Seniors. An exploration of the holocaust through diaries, memoirs, works of fiction, poetry, and later reflections on the phenomenon.

Questions to be dealt with will include: what was it like for the victims? What was it like for the Nazis? How could it have happened? What elements from Jewish, Christian and secular tradition contributed to its possibility? What have been some of its effects on our own feelings about life and human beings? How have various Jewish, Christian, and secular thinkers responded to the challenge of this event? (Rabbi Gendler)

33 **Varieties of Religious Experience**
 (Not offered in 1990-91.)

36—1 (7361) **Proof and Persuasion**
 36—2 (7362)
 36—3 (7363)

Four prepared class periods. Open to Lower and Upper Middlers and Seniors. A practical introduction to informal logic and to the philosophical study of language. Some of the questions raised are: What is the difference between a good argument and a poor one? What are the common fallacies of thought? What are the limitations of logic? What is the meaning of "meaning" and the truth about "truth"? The course stresses the development of individual skill in argument and includes a critical examination of the patterns of thought one encounters every day in magazines, newspapers and on television. (Mr. Hodgson)

41—1 (7411) **Views of Human Nature**
 41—3 (7413)

Four prepared class periods. Open to Upper Middlers and Seniors, and to Lower Middlers with permission of the instructor. A critical examination of selected traditional and contemporary views of human nature with the following questions in mind: Do we have a characteristic nature? What are our basic needs, purposes, rights, obligations and values? To what extent are our actions

determined by heredity and instinct? Are we free? Are we responsible for our actions? Do the answers to any of these questions differ for males and females? Given an understanding of human nature, how should we structure society to satisfy our needs and take advantage of our potential? Class discussions and written exercises are designed to encourage participants to develop views of their own against a background of a basic understanding of the readings. These include selections from the Bible and Plato's *Timaeus*, *Walden Two* by B. F. Skinner, *On Human Nature* by E.O. Wilson and *The Politics of Experience* by R. D. Laing. (Mr. Hodgson)

43—1 (7431) **Law and Morality**
 43—2 (7432)

Four prepared class periods. Open to Upper Middlers and Seniors, and to Lower Middlers with permission of the Instructor. A critical examination of issues that arise out of the relationship between law and morality. Questions of concern include: For what reasons, if any, should an individual obey or disobey the laws of society? Which kinds of governments (monarchy, aristocracy, democracy, etc.), if any, are legitimate? To what degree should society restrict the freedom of individuals through laws on matters like abortion, pornography, race and sexual relations? Class discussions and written exercises are designed to encourage participants to develop views of their own against a background of basic understanding of the readings. These include selections from the works of Plato, Hobbes, Rawls and Martin Luther King, Jr. (Mr. Hodgson)

44—3 (7443) **Nonviolence in Theory and Practice**
 Four prepared class periods. Open to Upper Middlers and Seniors. The militarily most destructive century in human history, our twentieth century, has also been one in which such men as Gandhi and Martin Luther King, Jr., have successfully applied nonviolence to conflict situations. What is the theory of this approach to human conflict? What are some of its psychological assumptions? What is its religious and human significance? By what means does it operate? What are its prospects for the age ahead? We shall use case histories, the testimonies of those directly involved in such struggles, films, critical and theoretical studies in trying to clarify and comprehend some of these elements of nonviolence. Readings include Joan Bondurant's *The Conquest of Violence* as well as writings of Gandhi and King. (Rabbi Gendler)

45—2 (7452) **In Search of Meaning**
 45—3 (7453)

Four prepared class periods. Open to all Upper Middlers and Seniors and to Lower Middlers with permission of Instructor. The reflective person is confronted with ques-

tions that hunger to be answered yet elude definitive, "objective" answers. The person's faith is often what sustains him/her and provides "subjective" answers to these fundamental questions. The issues of creation, of death, of evil, of identity, of purpose all challenge one's faith. This course (which takes its title from Victor Frankel's book) will consider these issues from a faith perspective using Scripture, literature (i.e. *Equus*, *No Exit*, *The Little Prince*, *The Shadowbox*, *Man's Search for Meaning*, *I Heard the Owl Call My Name*, etc.) and other materials. (Fr. Gross)

46—1 (7461)

Bioethics: Medicine

46—2 (7462)

Four prepared class periods. Open to Upper Middlers and Seniors. Is a physician's confidentiality absolute? When can we experiment on human beings? How should we treat defective newborns? Should the government be telling doctors what they may and may not do? What about the Hippocratic Oath? Who should set the ethical standards for medicine? What is ethics anyway? Considering these and other questions, through case studies, discussion and readings, this course provides a brief introduction to moral philosophy, its application to issues in medicine and medical research and its role in setting public policy. (Dr. Avery)

47—3 (7473)

Bioethics: The Environment

Four prepared class periods. Open to Upper Middlers and Seniors. Do only humans have rights? Do animals count? Should trees have standing? What is the value of wilderness or a salt marsh? Have we any obligations to rivers and mountains and birds of the air? Considering these and other questions, through case studies, discussion and readings, this course provides a brief introduction to moral philosophy, its application to environmental issues and its role in setting public policy. (Dr. Avery)

☛ **EACH OF THE FOLLOWING COURSES MAY REQUIRE MORE THAN THE STANDARD 4 TO 5 HOURS PER WEEK OF HOMEWORK.**

50—2 (7502)

Existentialism

Four prepared class periods. Open to Upper Middlers and Seniors. The term "existentialism" covers a broad range of attitudes and values that are joined together by an emphasis on human existence. The authors brought together in its name share a characteristic concern for the problems of meaning, identity and choice that confront men and women in everyday life. The lectures, discussions and readings are designed to help us locate and express these problems as they confront each of us in our own lives and to assist in understanding and resolving

them by drawing on the experiences and insights of the major existentialist thinkers. Readings: Nikos Kazantzakis, *Zorba the Greek*; Friedrich Nietzsche, *Thus Spake Zarathustra*; Jean-Paul Sartre, *No Exit and Being and Nothingness*; Soren Kierkegaard, *The Sickness unto Death*; Martin Buber, *I and Thou*. (Mr. Hodgson)

51—1 (7511)

In Search of Justice:

51—2 (7512)

from Socrates to Marx

51—3 (7513)

Four prepared class periods. Open to Upper Middlers and Seniors. Who or what decides if my behavior is just? God, nature, the powerful, society, my emotions, the economic system? What is justice anyway? Or is the whole question a logical mistake? Through reading and discussion the course encourages participants to develop their own views on these issues in dialogue with Plato, Aristotle, Bentham, Mill, Marx and others, so that they will be better equipped to make their own contribution to the never ending search for justice. (Dr. Avery)

52—3 (7523)

Great Philosophers

The great philosophers challenge us to address difficult and fascinating questions that perennially face mankind: What is the good life? What are the sources of human experience? Is there anything we can know with certainty? Does God exist? What is the relationship between my mind and my body? This course critically evaluates the responses of Plato, Descartes, Hume and Whitehead. (Mr. Hodgson)

Physical Education

All Juniors and new Lowerers are required to elect one trimester of *P.E. 10* in addition to their regular athletic commitment.

10—1 (9201) Physical Education

10—2 (9202)

10—3 (9203)

Pass/Fail. Limit of 15 students per section. Five class periods per week. The course integrates health and fitness concepts with self-testing and challenge activities. Classes use the running track, weight room, ropes course and other areas of the athletic complex. Students learn the drown-proofing survival technique. One period per week is lecture-discussion, requiring some outside reading or other preparation. If the course is failed, the student will repeat it, in full or in part, during a subsequent term. Students should not enroll in this course unless they are able to swim.

Psychology

The Psychology Department offers two elective courses which examine fundamental concepts in the field. Particular emphasis is placed on helping the student explore the interface between psychological knowledge and personal growth. This is accomplished by utilizing teaching strategies which integrate formal academic work with frequent opportunities for student participation and self-exploration.

32—1 (7021)

32—2 (7022)

32—3 (7023)

Introductory Psychology

One double period and two prepared class periods; for Uppers and Seniors. A survey course designed to introduce the student to the complexity and diversity of psychological inquiry. Emphasis is placed on the application of basic psychological principles to individual experience in order to expand awareness of both self and others. In addition, the broader implications of psychological findings for an integrated understanding of human development and behavior are considered. Topics to be covered may include: psychoanalytic, behavioral and humanistic theories of the person, psychosocial, cognitive, moral

and early childhood development, human motivation and personality, abnormal behavior and research techniques in psychology. Lectures are designed to catalyze discussion. A combination of objective examinations and individualized writing assignments are utilized to evaluate the student's learning.

33—3 (7033)

Developmental Psychology

One double period and two prepared class periods: for Uppers and Seniors. An examination of human growth and development from infancy through adulthood. The role of early experiences and biological factors in later formation of personality, intellectual and motivational behaviors will be considered. Different theoretical perspectives (psychodynamic, social learning and biological) of psychological development will be examined as they relate to developmental milestones. Among the theorists to be studied are Piaget, Erikson, Freud, Gilligan, Bandura, and Vaillant. The format of the course includes readings, films, quizzes, and a term paper.

Science

The diploma requirement in science is a yearlong laboratory course and three additional terms of science. Distribution may be attained by yearlong courses or term-contained. At least one of those terms must be a course in the biological sciences if the yearlong course were chemistry or physics and, conversely, at least one of the term-contained courses must be in physics or chemistry if the yearlong course were in biology. If a Junior takes a yearlong lab science that will count toward the requirement; if a Junior takes term-contained science courses, only one term will count. Two yearlong courses will, of course, fill the requirement as long as one of the courses is in biology and the other is in either chemistry or physics. Students should consider taking achievements after yearlong courses in biology, chemistry and physics.

Although the science requirement is for one yearlong course and three terms, a strong academic program will have three years of science. The order in which biology, chemistry, and physics are taken will have to vary with a student's degree of mathematical sophistication, previous science courses, and interest.

Each department offers advanced courses for students who wish to add depth to their science studies, and topic focused term-contained courses which are not advanced to allow students to explore and discover an interest in biology, chemistry or physics outside the traditional introductory syllabus.

We urge all Juniors to take some science. For those students who are at the *Math 19* level or higher, a year of science will be a good beginning to a solid high school science education. Juniors who are at the *Math 10* level or who do not elect to take a year of science are encouraged to take two term-contained courses at the Junior level. These courses are designed to both engage Juniors in a particular branch of science and to put them in a stronger position to take advantage of yearlong science opportunities as Lower.

Biology

15—1 (8051) **Introduction to Oceanography**

Four prepared class periods. This is a one-term course for Juniors who have not taken *Biology 25* or *Biology 30* or their equivalent. The 70% of our earth's surface comprising the oceans is examined from a number of biological, physical and chemical perspectives. Accordingly, we investigate the origin of the oceans and interactions among the thousands of living organisms found in or near the sea. Films and slides complement the classroom portion of the course. Special emphasis is given to the biology of sharks and whales.

17—2 **Introduction to Zoology** (Not offered in 1990-91.)

Four prepared classes per week, one of which will be used for laboratory work. This is a one-term course designed for Juniors who have not taken *Biology 25* or *30* or their equivalent. A study will be made of the similarities and differences among the major animal divisions from the most primitive invertebrates to the most complex vertebrates. Areas of concentration will include the basic systems of each phylum (*i.e.*, digestion and reproduction), as well as the ecological role and the evolutionary development of the organism. Lab periods will be used to develop techniques of dissection while studying the anatomy of animals from selected phyla.

The Biology department offers two yearlong introductory level courses, each of which satisfies the diploma requirement for a laboratory science.

A student entering Phillips Academy as a Lower, Upper, or Senior who wishes to receive Biology credit on the strength of a course taken in the 9th grade at another school may do so upon passing a validation test to be administered after the student arrives at Andover.

25—0 (8120) **Introduction to Biology**

Five prepared class periods each week, of which two will be in the laboratory. This course is intended primarily for Juniors and for Lower Middlers with little previous exposure to science. A topics approach usually centered around laboratory experiences is employed in order to acquaint students not only with fundamental biological principles but also with the methods and techniques used to elucidate them. Attention is paid to the processes by which scientific evidence is gathered, interpreted, and summarized. Part of the Spring Term is set aside for work on individual or small group laboratory research projects. (This course is not open to Seniors.)

30—0 (8130) **College Biology**

Three prepared class periods and one double laboratory period each week. This is a survey course for those students with previous exposure to some of the basic principles of science. It stresses the unity of life, rather than the diversity, by emphasizing the functions common to all living things. It covers, in plants, animals, and microorganisms, the fundamental principles of metabolism (including nutrition, gas exchange, materials transport, excretion, and homeostasis), responsiveness and coordination, reproduction and development, genetics, evolution and ecology. Part of the Spring Term is set aside for work on individual or small group laboratory research projects. The text is *Biosphere* by Wallace, King and Sanders, or a similar college-level text. Juniors who take *Biology 30* should be in *Math 19* or above and have very strong reading skills. Uppers or Seniors who want to be in a fast-moving section for older students should so indicate on their COURSE SELECTION form. The syllabus of this course is appropriate preparation for the College Board Achievement Test.

31—2 (8142) **Human Biology**

Five prepared class periods, of which at least one will be in the laboratory, each week. This one-term survey course is for Uppers and Seniors who have not had *Biology 25* or *30* or previous credit in Biology. It stresses the principles of human physiology including: nerve and

muscle function, nutrition, gas exchange, material transport, the immune system, excretion, homeostasis, and human reproduction and development. The course will also expose students to recent developments in molecular genetics and their relation to human physiology.

Since the breadth and depth of coverage are similar to that in the Winter Term of *Biology 30*, students who take *Biology 31* will not be able to take *Biology 25* or *30* subsequently. *Biology 31* may be taken for one term only.

41—1 (8211)

Ecology

41—3 (8213)

Three class periods and one double field or laboratory period each week. For Uppers and Seniors who have completed a yearlong science course. This course will examine ecosystems, energy flow and populations, and will take an interdisciplinary approach to problems of societal concern such as pollution, population growth, environmental ethics, and food supply. A project or shortpaper will be required. This year the laboratory/field work will emphasize behavioral ecology.

42—1 (8221)

Animal Behavior

42—3 (8223)

Three class periods and one double laboratory period. Open to Uppers and Seniors who have had one year of laboratory science. The course is designed to familiarize the student with the basic principles of animal social behavior. The topics which receive the greatest emphasis are: territoriality, altruism, mating strategies, courtship, parental behavior, migration, dominance, and the evolution of behavior patterns. Throughout the course, an effort is made to relate the behavior of animals to the behavior of humans. A project or a research paper will be required.

45—2 (8232) **AIDS and Other Modern Diseases**

Four prepared class periods. Open to uppers and seniors who have had one year of laboratory science. This lecture course will examine public health threats posed by selected microorganisms. From AIDS and herpes to strep throat and the common cold, bacteria and viruses affect our quality of life and are major obstacles to Third World development. We will study the biology and epidemiology of these microorganisms and how to keep ourselves healthy, leading to an awareness of personal and global public health issues. The biology of AIDS and its unique properties as a disease will provide one important focus for the course.

Students who plan to take the Advanced Placement examination in Biology should see the Department Chair early in their Lower year. Because of recent changes in the approach of the AP exam, we have chosen not to offer a course specifically directed at Advanced Placement. Students who are particularly interested in Biology are encouraged to take *Biology 30* as Juniors or Lowers, followed by a year of Chemistry and a year of Physics, and then to take those advanced Biology courses which interest them. 50-level courses are open to Uppers and Seniors who have had *Biology 30* or its equivalent, whether or not they plan to take the AP exam.

51—1 (8251)

Evolution and Ecology

51—3 (8253)

Prerequisite: *Biology 30* or the equivalent. Three class periods and one double field or laboratory period each week. Evolution is a major unifying theme in biology, and the mechanism of natural selection serves as a foundation for examining ecosystems, energy flow, succession, and relationships between populations. Problems of societal concern such as pollution, population growth, environmental ethics, and food supply will be discussed. A short library research paper will be required. This course may require more than the standard 4 to 5 hours of homework per week.

53—1 (8261)

Molecular Biology

Prerequisite: *Biology 30* and one term of chemistry or permission of the instructor. Three prepared classes and one double laboratory period per week. Following a brief review of chemical principles, the course examines the major classes of biomolecules and how they are synthesized and degraded in the cell. Particular emphasis is placed on those reactions which are associated with energy conversion pathways such as respiration and photosynthesis. Enzyme function is considered both in terms of mechanisms of action and with regard to kinetics. The relationship between structure and function at the molecular level is emphasized in studies of molecular genetics and the control of genetic expression. This course may require more than the standard 4 to 5 hours of homework per week.

54—2 (8272)

Human Physiology

54—3 (8273)

Prerequisite: *Biology 30* or the equivalent. Five prepared classes per week. An in-depth consideration of some of the major systems of the human body, this course offers an opportunity to learn how to read and study from a

challenging college level text; the reading is dense, the terminology must be selectively appreciated, and the regulatory mechanisms discussed are complex. Lab work may include the dissection of a cat or appropriate experiments. A short library research paper will be assigned. This course may require more than the standard 4 to 5 hours of homework per week.

60—2 (8282) Biology-Chemistry Laboratory
60—3 (8283)

This is a course in LABORATORY RESEARCH. Open to Seniors and Uppers. Permission of the Department Chair is required. **Prerequisite:** one year of biology and one year of chemistry. Meets three double periods a week. Students in this course will learn laboratory techniques for working with bacteria, viruses, and perhaps tissue culture. Experiments will center on the molecular genetics of microorganisms, including the isolation, cutting and splicing of DNA by recombinant DNA biotechnologies. After learning a core of methodologies which are used in professional labs, students will apply them to short, focussed research projects in microbiology.

Finally, students may use this course as a springboard for a Westinghouse project, which would be accomplished at a professional lab during the following summer. Reading articles in scientific journals as appropriate would be part of a student's research. Students will also be asked to keep a lab journal and to write a final paper. This course, if failed, may not be made up by examination.

Chemistry

11—1 (8311) Elements and Compounds
11—2 (8312)
11—3 (8313)

Five class periods per week. Open to Juniors. This is a lab centered course in which students are introduced to beginning chemistry in a variety of ways such as: the study of measurement and density, the synthesis of an alloy and of the salt alum, the use of alum (a mordant) to dye wool with student made dyes and the synthesis of paint. These lab experiences form the vehicle for learning about chemical formulae, chemical reactions, chemical arithmetic (stoichiometry), and the nature of light absorption (color).

25—0 (8420) Introduction to Chemistry
 Five class periods per week. **Co-requisite:** registration in *Math 19* or above. An introduction to the chemical view of the material world, including atomic theory, atomic

structure, chemical reactions, the nature of solids, liquids, gases, and solutions, acid-base theories, electrochemistry, and the chemistry of the organic compounds. Making connections between chemical principles and everyday life will be emphasized. One or two class periods per week will be devoted to laboratory work. The syllabus of this course is appropriate preparation for the College Board Achievement Test.

30—0 (8430) College Chemistry
 Five class periods. **Co-requisite:** registration in at least *Math 32* or its equivalent. This course is an introduction to the theoretical framework of modern chemistry, including atomic structure, chemical bonding, phase changes, solutions, chemical reactions, thermodynamics, kinetics, general equilibria, acid-base equilibria, electrochemistry, and aspects of inorganic and organic chemistry. Emphasis is placed on developing problem solving and understanding the experimental basis of theories. Text is *Chemistry* by Raymond Chang, or at the same level. Laboratory work is an integral part of the course. The syllabus of this course is appropriate preparation for the College Board Achievement Test.

31—1 (8441) Short Introduction to Chemistry
 Open to Seniors who have not had a year of chemistry. Five class periods per week. This course surveys the basic principles of chemistry, such as elements and compounds, periodic table, atomic structure, bonding, general reactions, acid-base chemistry, and simple chemical arithmetic. Laboratory work is an integral part of the course.

36—3 (8463) Chemistry of the Environment
 Four prepared class periods. Open to Seniors, Uppers, and Lower. This course is concerned with the effect of chemistry on the citizenry. Current issues — such as acid rain, chemical safety, waste disposal, and air and water pollution — are discussed. Chemical theories and principles are introduced as needed. Laboratory work and periodical readings are integral components.

44—2 (8522) Chemistry of Nutrition
44—3 (8523)

Prerequisite: One year of biology, chemistry, or physics. Four prepared periods per week. This course will study carbohydrates, fats, proteins, vitamins, and minerals, with respect to their chemical structure role in the human body, and occurrence in food. As well, the connection between diet and disease will be examined. What is the nature of the relationship between fat and cancer, and fat and heart disease? What is the data underlying the fiber hypothesis, the possible protective role of vitamin A, and the claims for vitamin C? Other topics such

as sports nutrition, energy balance, and food additives will also be addressed. A short research paper on some topic of interest will be required.

51—3 (8543)

Organic Chemistry

Prerequisite: Completion of either *Chemistry 25* or *30*. Three recitation periods, and one double laboratory period. Students interested in medical or biological fields or in additional chemistry must generally wait until the college sophomore year before studying organic chemistry, the chemistry of carbon compounds. This course is a prior introduction to this critically important and fascinating subject.

Organic chemistry is largely non-mathematical and descriptive in nature. Students will use a condensed "minicourse" text, learn many of the laboratory techniques unique to organic chemistry, make use of three-dimensional plastic molecular models, and gain a sound background in nomenclature, functional groups, bonding, simple mechanisms, typical reactions, and infra-red spectra.

52—12 (8554) Advanced Placement Chemistry (T2) (a two-term commitment)

Prerequisite: *Chemistry 25* or *Chemistry 30* completed with distinction. Four recitation periods and one double laboratory period. This is a rigorous course which treats the topics addressed in *College Chemistry* in greater depth. It also prepares students who wish to take the Advanced Placement Examination in chemistry. This course may require more than the standard 4 to 5 hours per week of homework. The syllabus of this course is appropriate preparation for the College Board Achievement Test.

55—0 (8570) Advanced Placement Chemistry

Four recitation periods and one double laboratory period. Open to talented students who will be enrolled in at least *Math 35*, may have taken a physics course, and have not taken any previous chemistry. This is a rigorous course which treats the topics addressed in *College Chemistry* in greater depth, and prepares students for the Advanced Placement Examination in Chemistry. This course may require more than the standard 4 to 5 hours per week of homework. The syllabus of this course is appropriate preparation for the College Board Achievement Test.

60—2 (8282) Biology-Chemistry Laboratory 60—3 (8283)

This is a course in LABORATORY RESEARCH. Open to Seniors and Uppers. Permission of the Department Chair is required. **Prerequisite:** One year of biology and one year of chemistry. Meets three double periods a week. Students in this course will learn laboratory techniques

for working with bacteria, viruses, and perhaps tissue culture. Experiments will center on the molecular genetics of microorganisms, including the isolation, cutting and splicing of DNA by recombinant DNA biotechnologies. After learning a core of methodologies which are used in professional labs, students will apply them to short, focussed research projects in microbiology.

Finally, students may use this course as a springboard for a Westinghouse project, which would be accomplished at a professional lab during the following summer. Reading articles in scientific journals as appropriate would be part of a student's research. Students will also be asked to keep a lab journal and to write a final paper. This course, if failed, may not be made up by examination.

Physics

10—2 (8602)

Introduction to Energy

10—3 (8603)

Five class periods. Open to Juniors. This course will explore the physics involved in the study of energy by looking at its uses and effects on our daily lives. Through reading, problem solving and extensive laboratory work, students will become familiar with mechanical, heat, electrical, sound and light energy and energy conservation. Individual student research on different energy resources will be an integral part of the course.

18—3 (8683)

Introduction to Observational Astronomy

Four prepared class periods, with one period each week used for observation. This course is intended for Juniors and Lowers who want to become familiar with the universe in which we live. Topics include a study of the daily motion of the earth, moon, sun and planets by examining how those motions are responsible for night and day, seasons and the things we see in the sky. The course will also examine the structure of the solar system and will explore the NASA space program through films and discussion. Much time will be spent making and analyzing naked eye and telescope observations of the night and day time sky.

20—0 (8700)

Physics Honors for Juniors

Five prepared class periods. **Co-requisite:** Registration in at least *Math 19*. This is an honors course for talented Juniors with a strong interest and background in science and mathematics. Students entering this course should have completed one year of algebra with an honor grade.

Laboratory work is an integral part of the course. The syllabus of this course is appropriate preparation for the College Board Achievement Test.

25—0 (8720) Introduction to Physics
Five class periods. **Co-requisite:** Registration in at least *Math 21*. Not open to Seniors except by permission of the department. An introductory course in the basic concepts of physics. The topics are covered in a less rigorous mathematical way than in *Physics 30*. Coverage includes mechanics, heat, waves, electricity, magnetism, and modern physics. Laboratory work is an integral part of the course. The syllabus of this course is appropriate preparation for the College Board Achievement Test.

30—0 (8730) College Physics
Five class periods. **Co-requisite:** registration in at least *Mathematics 34*. A non-calculus physics course, including a study of classical mechanics, wave motion, heat, kinetic molecular theory, relativity, geometrical and physical optics, and atomic and nuclear physics. Laboratory work is an integral part of the course. Text at the level of *College Physics*, by Sears, et al. The syllabus of this course is appropriate preparation for the College Board Achievement Test.

32—1 (8751) Classical Mechanics
This course covers the same material as the first trimester of *Physics 30-0*. Upon completion of this course, a student may, with departmental permission, transfer into *Physics 30*.

34—1 (8771) Cosmology
34—2 (8772)

Four prepared class periods. This course is open to Up-pers and Seniors. **Co-requisite:** registration in at least *Math 34* or its equivalent. Cosmology is the study of the structure and origin of the universe. Topics include the birth and death of stars, stellar temperatures, magnitudes and distances, the structure and origin of galaxies, a brief introduction to elementary particle physics and relativity, the Big Bang, the search for extraterrestrial life and the possible fate of the universe. The course will include some telescope use and students will be responsible for individual research on a recent cosmological topic of their choice.

35—1 (8781) Physical Geology
Four prepared class periods. A general introduction to physical geology, to include minerals, rocks, measurement of geologic time by radioactivity and fossils, volcanoes, seismology and earth structure, deformation of strata, faults, and plate tectonics. Some attention to disasters of geological origin, e.g. earthquakes, tidal waves,

and eruptions. Some of the periods will be used for laboratory work.

42—3 (8813) Electronics
Four class periods per week. **Prerequisite:** Previous completion of or concurrent enrollment in *Physics 30* and enrollment in at least *Math 36*. A course in modern solid state electronics which considers passive circuit elements and their combinations, diodes, transistors, and integrated circuits. There will be considerable laboratory work.

44—2 (8822) Geology of the Solar System
Four class periods per week. **Prerequisite:** Prior completion of or concurrent enrollment in one chemistry or physics course, and registration in at least *Math 34*. A study of the surfaces and interiors of the terrestrial and giant planets and their satellites, using results of manned and unmanned planetary probes as well as Earth-based observations. The emphasis is on elucidation of the surface features, internal composition, and evolution of these bodies for comparison with the Earth.

52—12 (8854) Advanced Placement Physics (T2)
(a two-term commitment)

Five class periods. **Prerequisite:** An honor grade in *Physics 30* or its equivalent and enrollment in at least *Math 54* or its equivalent. This is a rigorous course in mechanics (Fall term) and electro-statics and dynamics (Winter term). Calculus will be used as required. This course prepares candidates for the C-level Advanced Placement Examination in Physics and entrance to honor level programs in physics at the university level. This course may require more than the standard 4 to 5 hours of homework per week.

55—0 (8870) Advanced Placement Physics
Five prepared class periods. Open to talented students who will be enrolled in at least *Math 54*, may have taken a chemistry course and have not taken any previous physics. If you are interested in this course, you may sign up for it with your academic advisor in the spring or you may request it on your course registration form. The department chairperson will then review your credentials and invite you to join the course or suggest you enroll in *Physics 30*. *Physics 55* prepares students for the C-level Advanced Placement Examination and is a rigorous course emphasizing mechanics and electro-statics and dynamics. This course may require more than the standard 4 to 5 hours of homework per week.

60—3 (8893) Relativity and Quantum Mechanics
Prerequisites: Enrollment in at least *Physics 30* and *Math 54*. Four prepared class periods. Relativity and Quantum Mechanics are two theories that completely revolution-

ized man's thinking about the universe. The course is a survey of the basic ideas underlying these theories. Special mathematical techniques needed for a better understanding of the material are developed in the course.

65—2 (8902) Physics Seminar
Four class periods. **Prerequisite:** Completion of *Math 54* and of the fall trimester of *Physics 52*. The focus of this course is Intermediate Mechanics. Topics will vary according to the interests of the instructor and the students.

Study Skills

(9502) **Basic Study Skills**
(9503)

Four class periods. This course is designed to help students build effective study skills through understanding more about the learning process. Class discussion focuses on the problems of motivation, concentration and retention. Exercises are designed to work on improvement in each of those areas and to develop proficiency in planning study time, in developing accurate yet flexible reading comprehension, in taking notes and marking books, and in preparing for exams. This course may be taken for at most one term.

(9521) **Language Skills I**
(9522)
(9523)

Four class periods. This course is designed for those students who need supplementary help in overcoming weaknesses in writing, spelling and vocabulary. Specific assignments are planned to meet the needs of each student. Permission of the instructor required.

(9533) **Language Skills II**

Four class periods. Seniors and Uppers who need help in writing essays and research papers may elect this course for the Spring Term only. Organizational skills, paragraph and sentence structure, and theme development will be reviewed, depending on students' individual needs. Students must have permission of the instructor.

(9541) **English as a Second Language**
(9542)
(9543)

Four class periods. This course is for those International students who need to improve their English proficiency. Specific assignments are designed to strengthen listening comprehension, conversational fluency, and writing skills in a second language. One English credit is earned for the course.

Theatre and Dance

All courses are electives, open to the various classes as noted. Courses in theatre are designed for students who wish formal exploration of the elements of stage work and a supplement to (or substitute for) extra-curricular work in productions. A variety of experiences is available: some courses result in performance; some courses study theory; some do both. Theatre students are encouraged, though not required, to supplement their class work by participating in any of the numerous productions mounted each year.

THEATRE COURSES

21—1 (6511) Introduction to Acting

21—2 (6512)

21—3 (6513)

Four class periods. Open to all classes. This course is designed for students with little or no acting experience. By doing exercises in movement and voice production, reading, improvisation, and scenes, a student who is curious about the theatre may determine whether he or she has ability or interest in acting, while learning something of the process of characterization, the major responsibility of the actor. The emphasis is on the variety of acting experiences rather than on a polished final product.

22—1 (6521) Public Speaking

22—2 (6522)

22—3 (6523)

Four class periods. Not open to Juniors. The course has a dual objective: to learn how to speak easily in front of others, and to learn how to speak English well. Students give prepared speeches on a variety of topics.

26—13 (6561) Technical Theatre
(6563)

Two double periods. Open to all classes. Through practical experience in designing, building, and lighting for plays currently being produced, students learn the elements of stagecraft, including set construction, stage rigging, and the use of lighting instruments and gels. For the Fall Trimester emphasis will be on stagecraft; for the Spring, lighting.

32—2 (6622) Intermediate Acting

32—3 (6623)

Four class periods. **Prerequisite:** *Theatre 21*, or departmental permission. Building upon the principles of act-

ing introduced in *Theatre 21*, this intermediate acting course consists of detailed scene work exploring the relationship of the actor to his audience and to his fellow actors and focusing on the creation of dramatic moments, both with and without scripts. The course considers various acting styles, in an effort to guide the actor toward a greater understanding of his responsibility on stage: to see to what degree he can remove himself from himself while creating truthful characterizations.

51—1 (6711) Acting and Directing Workshop

Two double periods. **Prerequisite:** *Theatre 21* or 32, or departmental permission. Uppers and Seniors only. The course serves two kinds of students: those who wish as actors to study plays and characters in greater depth and those who wish to study the principles and techniques of directing, the most complex of theatrical tasks. Class members work with manageable scenes from classical and contemporary periods, reading theories of acting and directing, studying various performance styles, and examining methods of scene interpretation. The total time requirements for this course (class time plus homework) may exceed the standard 9 hours per week.

52—123 (6721) Play Production
(6722)
(6723)

Four double periods. By audition. This course is oriented toward the performance of a significant work by an important playwright. Recent choices have been *The Sea Gull*, *Macbeth*, *As You Like It*, *The Hostage*, and *Hamlet*. The total time requirements for this course (class time plus homework) may exceed the standard 9 hours per week.

See also **Playwriting (English 516)**.

DANCE

25—123 (6801) Introduction to Dance
(6802)
(6803)

Four prepared class periods. Open to all classes. A formal course in movement and composition which introduces the serious student to the vocabulary and other elements of dance through active participation. The emphasis is not ultimately on public performance, but on the process and the discipline of modern dance. (Ms. Brecher)

Phillips Academy
Andover, Massachusetts 01810

ANDOVER

Catalog 1990-91



Phillips Academy admits students of any sex, race, color, national and ethnic origin to all the rights, privileges, programs and activities generally accorded or made available to students at the school. It does not discriminate on the basis of sex, race, color, national and ethnic origin in administration of its educational policies, admission policies, scholarship and loan programs, and athletic and other school-administered programs.

Andover

Catalog



Published by Phillips Academy Andover, Massachusetts 01810



Phillips Academy,
Andover, Massachusetts,
better known as Andover,
is an independent,
coeducational, integrated
and non-sectarian
institution offering a
variety of academic
programs for high school
students.

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Some questions you might have

Q: I am not familiar with boarding school; what will life at Andover be like?

A: In a boarding school, teaching goes on 24-hours a day. Andover's 1,200 students are adolescents who need guidance and support not only in the classroom, but in all aspects of their development, including their athletic ability, social skills, multicultural awareness, and ability to make moral decisions. With a faculty/student ratio of six to one, Andover's faculty members are able to develop close relationships with their students and to guide them effectively in all of these areas. The cluster system of six "schools within a school" is also designed to create opportunities for close student-faculty contact and to give students the advantages of a small residential community.

Q: What exactly is the cluster system?

A: A cluster is a group of about 200 boarding and day students and forty faculty families headed by a cluster dean. Each cluster is a microcosm of the school at large, composed of students from all class years, from all backgrounds, and with all sorts of interests. During the course of the school year, each cluster takes on its own distinct personality. The six clusters, organized by the geographic locations of their member dorms, are Rabbit Pond, Flagstaff, Pine Knoll, West Quad North, West Quad South, and Abbot. In addition to forming the backbone of Andover's school spirit, the clusters provide the context for students' academic advising, disciplinary proceedings, personal counseling, intramural sports, and weekday social functions.

Q: Who are the students' advisors?

A: The primary advisor for a boarding student is his or her house counselor, whose apartment is in the dormitory, who sees the student every day, and with whom the student often forms a close personal relationship.

Day students, similarly, have day student advisors. All students also have an academic advisor, plus five classroom teachers and a coach or special activities advisor each term. These advisors communicate regularly with parents, through formal correspondence as well as informal conversations and phone calls, and they encourage parents to contact them with any concerns.

Q: What kind of extra help is offered?

A: Classroom teachers and house counselors are available for one-on-one extra help sessions during the morning conference period and—because 95% of the teaching faculty live on campus—in the evening as well. Both the Graham House Counseling Center and the Office of Community Affairs offer student tutorial services, study counseling, study skills courses, and psychological counseling. Additionally, a math teacher is available three nights a week at an evening math study hall.

Q: What is the school's policy regarding drugs and alcohol?

A: The possession or use of alcohol or illegal drugs is forbidden at Andover. To help our students understand why these substances interfere with development, an intensive, week-long series of classes and seminars is held each fall by the school's counselors and such organizations as Freedom from Chemical Dependency Foundation. The entire student body attends. At all times during the school year, professional counselors are available at Graham House, the Dean of Residence's Office, and the Office of Community Affairs. A Drug and Alcohol Awareness Committee also offers peer discussion and support. Discipline for infractions of the rule is explained on page 20 and also in the students' rule book, *The Blue Book*.

Q: What support systems are available to students of color?

A: Andover is a multicultural community; more than one-quarter of the student population is non-white. In addition to the Afro-

Latino-American Society for black and Hispanic students, and the Asian Cultural Society, the school has an Office of Community Affairs and Multicultural Development. The dean and full-time staff of that office are available for personal and academic counseling.

Q: What are sports like at Andover?

A: Competitive athletics are available in all major sports at all levels, from varsity, sub-varsity, and beginners interscholastic teams to intramural cluster teams. Andover's teams have won numerous titles and tournaments: in 1989 Andover's teams won New England interscholastic championships in girls' crew, girls' gymnastics, boys' and girls' winter track, softball, boys' tennis, and boys' spring track. Many of Andover's individual athletes have also been chosen for select teams in several sports and have received All-League, All-State, and All-American honors.

For Andover's students who are not interested in competitive sports, the school offers an exciting range of athletic alternatives, including dance, aerobics, yoga, kayaking, swim instruction, scuba diving, Search and Rescue, and many more.

Q: What is the average number of students in a class?

A: The average class size is 14; a class may be as small as 6 or as large as 15.

Q: How are day students integrated into the community?

A: Day students are involved in all aspects of school life. Like boarding students, they belong to a cluster and participate in all cluster and school-wide events, including those held in the evenings and on weekends. Day students are also permitted to sleep over at a friend's dorm, just as boarders, with their parents' permission, are allowed to sleep over at a day student's home.

Q: Can I afford Andover?

A: Yes; a wide range of options make it possi-

ble. The academy has more than \$4.7 million available annually for financial aid in scholarship grants and loans: 37% of our students receive financial aid. Also, the academy has an innovative financing package, THE ANDOVER PLAN, which provides payment options suitable for a range of family financial situations. For complete information, please turn to page 56.



Our admission staff (l. to r.: Bobby Edwards, Beth Moore, Scott Looney, Holly Weston, Dean Jeannie Dissette, John O'Brien, Betsy Eaton, Peter Drench, Grace Taylor) is happy to answer any questions you might have. Also, parents of current students who are members of the Andover Parent Network are available to you with another perspective of life at Andover; their names and addresses are listed on page 88.

If you have questions about Andover's admission or application procedures, or to request a catalog, write or call:

Admission Office
Phillips Academy
Andover, Massachusetts 01810

Admission Office direct line: (508) 475-9353
Switchboard: (508) 475-3400, ext. 4050

Office hours: Mon.-Fri., 8:30 a.m. to 4:30 p.m.
Sat., 8:30 a.m. to 12 noon, Oct. 1- Jan. 31.



Introduction to Andover



Phillips Academy in 1778

In 1789 the first scholarship monies are recorded, from John Phillips, "in consideration of further promoting the virtuous and pious education of Youth, (poor children of genius and of serious disposition especially) in Phillips Academy, founded in Andover, Massachusetts." Today, approximately 37% of the student body benefits from financial aid in the form of \$4.7 million dollars a year in outright grants or loans, ensuring a broad diversity within the student body.

by Donald W. McNemar, Headmaster

In the introduction to his essay collection, "One Man's Meat," E. B. White wrote, "Once in everyone's life there is apt to be a period when he is fully awake instead of half asleep . . . one of those rare interludes that can never be repeated, a time of enchantment." I believe that Andover's students experience such a time during their few years on our campus. They come here during a most significant period of their lives. They come from every state in the nation, 28 countries, every economic circumstance, and every sort of ancestry. They are exposed first and foremost to one another and to the great benefits of a culturally diverse society. They are required to study. They are encouraged to travel. They are expected to dream. All of this happens on a campus of more than 500 acres, under historic elms, on playing fields and lawns where American soldiers trained for the Revolutionary War, and in buildings named for famous men and women who spent their own rare interlude here.

That our students are, as White wrote, fully awake instead of half asleep—which for an adolescent can be a far more comfortable state, especially at, say, 8 o'clock on a cold winter morning—is a testament to the strength of Andover's faculty. They are as accomplished in their fields as they are devoted to their charges. An English teacher may be a professional photographer, a house counselor may use his evenings to finish his second off-Broadway play, and a field hockey coach may also be a highly regarded research biologist. These talented adults teach Andover's students, play sports with them, perform with them, travel with them, and talk to them, frequently and at length, about school, careers, and the business of growing up.

It is not always a simple business. When I see an Andover sprinter who has just lost a race, which she began not only with expansive hopes but also with her parents watching, I smile and she smiles back. We both know it would be far easier and more truthful to shake our heads and grumble. She will go back to her dorm with problems: the "I blew it" problem, the "I blew it in front of my parents" problem, perhaps the "Will I ever be any good at this?" problem. Yet she will not have the luxury of feeling badly for long. Andover is a residential community, where

learning takes place 24-hours a day. Our sprinter will have a friend in the dormitory to talk things over with, and a house counselor who may have been an All-American athlete herself, or may not have been an athlete at all, and who will offer a fresh perspective. It is in these private conversations that so much learning takes place—about the value of effort and of humility, about the value of forcing a sociable smile when you feel like kicking the dirt. It is in these private conversations that Andover often reaches its goal of teaching students goodness as well as knowledge.

I do find myself smiling often here, and not only to cheer up an unhappy athlete. I have felt—we all have felt—those moments of elation when suddenly our breath catches, the hairs rise on our arms, and we are surprised by unexpected tears. As a child, I always seemed to have this feeling in the presence of a brass band. As Andover's headmaster, I find it overtakes me more frequently. Last winter, for example, students and faculty from our Music Department performed Handel's opera *Esther* on a stage constructed in the chapel. A senior soprano, Amy Zimmerman, stepped forward to sing an aria. She was dressed in an Israelite's white tunic; under the spotlights her eyes glittered. I expected that her voice might quaver, a concession to the grandeur of the chapel setting, and her youth, and perhaps stage fright, but her first note was pure and grew stronger the longer she held it. I had to smile simply to release my emotion. Others in the audience emitted gasps. We were treated to such chills all evening. I know that Andover's students accomplish great things here under the tutelage of a gifted faculty, yet the level of those accomplishments still sometimes takes me by surprise.

One of the students in the Chorus whom I had a chance to congratulate after the opera was Willie Tate, a senior baritone from Jackson, Mississippi. A few weeks earlier I had seen his excellent performance in a varsity football game. When Willie came to Andover as a tenth grader he could already sing quite well, but he learned his football here. And in this way, Willie is like many of Andover's students. They bring to this campus academic strength and artistic, creative, and athletic talent. But they also bring a desire to try something completely new—singing opera, writing sonnets, playing cricket, speaking Greek. With

our faculty to guide them, they grow as much from attempting their new skill as from mastering it.

I have heard people say that only great kids get into Andover, but I disagree. Good kids get into Andover, kids who are able and industrious, who are willing to strive for academic excellence and moral decisiveness, who are inspired by one another in this multicultural community. I think because of their experience here—because of these enchanted years—they have the opportunity to be great kids when they leave.

Headmaster Donald W. McNemar





Andover Life

A Beginning



In 1782 Paul Revere was commissioned to make the Phillips Academy seal. Revere engraved the educational faith of Andover's founders—"The end depends upon the beginning"—around the symbols of the rising sun and the hive of industrious bees. The founders' religious and patriotic commitment to the common good is symbolized by the second motto, "*Non Sibi*"—"not for one's self."

If you come to Andover today, you will not have to go far to see a building designed by Charles Bulfinch or named for Nathan Hale. You might take computer graphics in a modern arts and communications center, discuss African history in an archaeology museum, or study the War of 1812 in a building constructed before it took place. Your roommate might be from Brazil or Tennessee. You might learn how to play squash, how to be a DJ in a radio station or how to run rapids in a kayak. In any case, you will be expected to make the most of who you are. Andover students benefit from a careful combination of independence and support. Instead of formal study halls, we have study hours between 8 pm and 10 pm. Students are required to be signed in either to their dormitories or an academic area on campus (library, language lab, art studio, music building). Our junior (9th grade) dorms have an 11 pm lights out policy. There are many people here to help you: teachers in a residential setting are close by, either to chat or to review the math problem you did not understand in class. Professional study counselors stand ready to help you manage your time and give you advice on how to polish the term paper due next week. Your house counselor will be there to encourage you on your cycling, or teach you how he or she mastered irregular French verbs. The opportunities, and the support, are both here to help our students develop a strong sense of responsibility and independence.



The Abbot Bazaar, begun in May of 1920 at Abbot Academy to celebrate the original opening of the school, continues today as an annual outdoor carnival and rite of spring for Andover students. The Bazaar includes a dunking booth (traditionally occupied by the Headmaster), facepainting, tag sales, and picnicking.



The Place

The school is located on a hilltop in the town of Andover, a 35-minute bus ride from Boston and Cambridge. It is well situated for easy access not only to the historical, cultural and entertainment offerings of the Greater Boston area, but to the beaches and mountains for which northern New England is justly renowned.

Phillips Academy was the first boarding school to be incorporated in the United States (1780). During its more than two centuries the school has grown in size from a single rude building and a few acres of land to an extended campus of 160 buildings on over 500 acres.

A Purpose

This revised version of the Statement of Purpose, voted by the faculty in the spring of 1988, reaffirms the Academy's goals set forth in the Constitution of 1778.

Phillips Academy is a residential high school that seeks students of character and intelligence from diverse ethnic, racial, socioeconomic and geographic backgrounds.

The Academy's scholastic program is designed to foster excellence in all disciplines associated with the liberal arts tradition. Faculty members guide students to master skills, to acquire knowledge, and to think critically, creatively, and independently. The school strives to help young people achieve their potential not only in intellectual understanding, but also in aesthetic sensitivity, physical well-being, athletic prowess, and moral decisiveness so that they may lead productive, responsible lives.

Committed to discovering authentic sources of community, the Academy strives to understand and respect the differences that arise in a multi-cultural setting. Academic and residential programs encourage sensitivity to issues of gender, race, and social class. The school's residential structure fosters close association between faculty and students for personal, social, and intellectual development.

Andover's 1778 Constitution charges the Academy to prepare "youth from every quarter" to understand that "goodness without knowledge is weak and feeble; yet knowledge without goodness is dangerous." This obligation challenges students in mind, body, and spirit to see beyond themselves and to go beyond the familiar; to remain committed to developing what is finest in themselves and others, for others and themselves.



The People

Students

There are approximately twelve hundred young men (53%) and women (47%) in Andover's regular session, of whom about one-fifth are day students. More than eight hundred others attend the various programs and institutes of the Academy's Summer Session.

Andover students are divided into four classes: Seniors, Upper Middlers, Lower Middlers and Juniors — our traditional terms for 12th, 11th, 10th and 9th graders. Some are here for four years, most for a shorter time, but they all have two things in common: intelligence and the willingness to use it.

Faculty

Andover's faculty members have a keen interest and joy in adolescents, as well as exceptional talent in their respective academic fields. The faculty number two hundred and forty; two-thirds hold advanced degrees at the master's or doctorate level. Andover teachers teach not only in the classroom, but on the field, in the dormitory, and through numerous extracurricular clubs and activities as well. They demand as much of themselves as of their students: among a myriad of responsibilities to the school, the faculty find time to be authors, research scientists, photographers, prize-winning poets, theological scholars, and professional musicians.



The Work

All students who are admitted to Andover have the ability to succeed academically here. Those who choose to attend the school must be prepared, however, to work hard. Students at Andover must complete a required core of studies which the faculty feels is essential to a liberal education. This includes three years of language; a yearlong science course, plus three additional terms of science; three years of mathematics; a year of United States history with a required additional term of elective history; a term each of music, visual studies, religion/philosophy and physical education; three years of English. Requirements for a diploma vary according to the level at which a student enters the curriculum, and are described fully in the *Andover Course of Study*.

Beyond this framework, students choose their own courses with the guidance of an academic advisor. The school encourages all students to construct a curriculum which reflects breadth, depth and balance, and to take advantage of the hundreds of elective courses available.

A year, a week, a day

The Weekend Scoop

FRIDAY

5-7 pm, **The Addison Gallery**
Opening reception for *Selections From the Permanent Collection in Honor of Black History Month: Issues of Projection: Jacob and his Twelve Sons* by Stephen Davis. There are some wonderful works on display, so it is definitely worth seeing.

7 pm, **The Drama Lab**
Okay, maybe you've seen the signs, maybe you haven't, but its true, there is a play on campus called *The Importance Of Being Ernest* and this school is performing it. A lighter piece, the *Lunchbox*, written by Dan Frazier (who also directs both shows) will be shown directly after the main presentation.

6 pm, **All School Skating Party**
Come! The winter's first all school skating party will be a great time. Cocoa, tea, hot dogs. Don't worry if you can't skate, just slide around a little and have fun. Everyone's going to be there and it's a great opportunity to meet some new folks.

SATURDAY

6:30 pm **Taubman Room**
My inside connections with the French Department have let me in on what was a little secret, but now it seems

we'll let you all know that they're showing a nifty cartoon about a French cowboy—one hitch though—no subtitles, so only the real French masters among you will be able to catch the witty parody of the American western and the subtle puns in the rapid-fire dialogue

8:45 pm **Graham House Cafe**
Don't forget the Graham House Cafe, especially if the winter decides to come on strong this Saturday. Soda, juice, nachos, MUSIC AND LOTS OF GOOD TIMES lie ahead.

9 pm, **Dance—Le Vertigo**
Guess which of the school's ultra hip dance club setups is going to be working tomorrow? Le Vertigo featuring funky music, disco lights, refreshments. Its Hot!!!

7:30 and 9:45, **Movies**
Two great movies for a terrific group of underclassmen *Star Wars* at 7:30 and *An American Werewolf in London* at 9:45 in Kemper.

NEXT WEEKEND

Mozart's Birthday—The first music concert of the term is next weekend's celebration of Mozart's Birthday. From what I've seen and read, it seems to be a stellar schedule.

Andover operates on a trimester system, offering about 285 separate courses that vary in length from one trimester to the full year. The year begins in late September and ends in mid-June, with breaks at Thanksgiving, Christmas and in the early spring.

Classes are held on Monday, Tuesday, Thursday, and Friday, the full class days, and on Wednesday morning and every other Saturday morning.

Wednesdays and Saturdays are half study days with no afternoon academic appointments. On alternate Saturdays there usually are no morning classes and Sunday is totally free. This flexible weekly schedule provides time for independent study, rehearsals, and sports, as well as for informal visits to the art and archaeology museums, and for student-run extracurricular organizations such as the literary magazines, the school newspaper, the school radio station, and the many student clubs. Social events during the week are limited by the demands of the academic program, but the weekend program on campus includes dances, concerts, movies, plays and informal activities. Participation in athletics is required of all students, and athletics and activities are scheduled four afternoons a week for two hours each. On Wednesday and Saturday afternoons, varsity and sub-varsity teams participate in interscholastic competition.

Meals are served in Commons, our fifty-year-old central dining hall, composed of four handsome, traditional dining halls and four completely modern serving areas. The cost of meals is included in the fees of both boarding and day students.

The Daily Schedule

7:15 am	Commons opens for breakfast
8 am	Classes begin. Seven 45-minute periods per day
9:45–10:15 am	Conference Period
11:30 am–1:30 pm	Lunch available at Commons
2:45 pm	End of last class
3:15–5:15 pm	Sports
5–6:30 pm	Supper available at Commons
6:20–7:50 pm	Music rehearsals
8 pm	Underclass students are in their dormitories or doing academic work in the library, language lab, art studio, or music building
10 pm	Dorm sign-in for all students on weeknights (during 5-day weeks, Friday evening sign-in for underclassmen is 10 pm, 11 pm for seniors, and Saturday evening sign-in for all students is 11:30 pm)
11 pm	Lights out for juniors

Students normally have four or five class meetings per day.

Most students are eligible to take a day excuse each week, and, after the first two weeks of the year, overnight excuses beginning after their last scheduled weekly appointment.

Course work is intensive and involves about twenty to twenty-five hours of outside preparation each week. Required athletics or afternoon activities total approximately six hours each week. In addition, all students are required to participate in the school's work program, performing assigned tasks, supervision or leadership responsibilities two hours each week. Despite the amount of time that must be spent on academic pursuits, most students become very involved in extracurricular activities and social events. The school encourages independence and personal responsibility: there are study hours but no study halls.



Residential Life



On any given weekend, social events on campus could include at least one dance, a movie, coffeehouse or concert, and a theatre production in the Drama Lab. The Del Fuegos (above), called by *Rolling Stone* magazine one of its "New Artists of the Year" in 1985, performed at Andover recently. They are Woody Geissmann, Tom Lloyd '79, Dan Zanes '79, and Warren Zanes '83.

Dorms and Clusters

Boarding students live in boys' or girls' dormitories with house counselors and their families. The house counselors are the students' advisors, an arrangement which facilitates communication and the development of close relationships. The dormitories vary in size, housing from four to forty-four students; the large dorms have several faculty families. All living arrangements encourage close relationships among students and between students and house counselors' families. One-third of the students live in single rooms; two-thirds in large double rooms. Because students benefit from knowing members of all classes, most dormitories contain Lower, Upper, and Senior. Ninth-graders, however, all live together in dorms with special study hall and lights-out policies that are designed to help them adjust successfully to their first year at boarding school.

For many students, dormitory life is one of the most valuable aspects of their time at Andover. Whether it's planning a pancake breakfast or studying for a history mid-term, sharing it with people from very different backgrounds or from foreign lands is a rewarding learning experience.



Dormitories are grouped into six geographical units called "clusters," each including girls' and boys' dorms, about two hundred students from all classes, and forty faculty families. Clusters create the personal atmosphere of a small community in which everyone knows everyone else and people do most or many things together. The cluster system is the heart of Andover's residential life, bringing the advantages of a small school to an institution that already has the advantages of size.

The dean of residence oversees the six clusters, each of which is supervised by a cluster dean who works closely with student leaders and who knows all of the students in the cluster. Each cluster has its own academic counseling, student officers, intramural athletics, and informal social activities.

A faculty member is responsible for administering the student work program, which is designed not only to develop a sense of community responsibility for the daily operation of the school, but also to help the school reduce its operating costs. Working two periods a week, all students share the jobs of cleaning the dormitories, returning books to library stacks, serving as office helpers and laboratory assistants, and performing other essential tasks. In addition, all residents of a given dormitory are responsible for keeping its entries free of litter, snow and ice.

The clusters take turns each week working in the dining hall, seniors serving as overseers. Seniors have many other supervisory roles, including cluster and school offices, editorial boards of student publications, club leadership, and other assignments serving the Phillips Academy community.

Counseling and Discipline

Andover enforces a set of rules and procedures carefully designed to protect the rights of individuals and to enable the school to achieve its ends. Existing rules have a dual purpose: to preserve the necessary order in the community so that effective learning can take place, and to teach students that individual freedom can be achieved only through due consideration for others. Incoming students and their parents are provided with a copy of the *Blue Book*, summarizing rules and regulations; all students are held responsible for its contents.

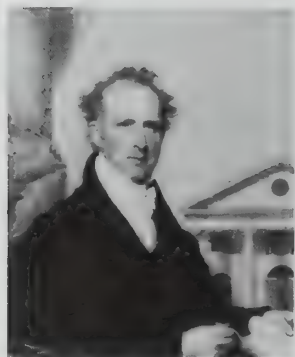
The resident house counselor is the faculty member most directly responsible for the students in a dormitory, working with them on both a personal and academic level. Parents can expect to hear from the counselor at regular intervals and are encouraged to turn to this faculty member for information about a student's progress.

Each cluster dean supplements the work of the house counselor and is available to students and parents for information and

advice. Other support staff include academic advisors, who help students in the cluster to plan their academic programs, and the College Counseling Office, which assists all seniors with their future educational plans.

Graham House Counseling Center serves the community in several ways. The staff offers psychological counseling, study counseling, study skills courses, student tutorial services, the Psychology Department curriculum, consultation to faculty and staff, and specialized workshops in response to residential needs.

Discipline is handled at the cluster level and involves the cluster dean, house counselor, other faculty, and student representatives. Offenses involving a student's integrity, social offenses that threaten the well-being of other individuals or the school community, and continued infractions that indicate an unwillingness to come to terms with the demands of the school—all render a student liable to dismissal. Cluster recommendations for suspension or dismissal are made to the headmaster, who makes the final decision. Examples are dishonesty, the possession or use of alcoholic beverages or illegal drugs, and unauthorized absence from school bounds. Students may not possess, rent or drive any motor vehicle within school bounds; bicycles are permitted.



Young Josiah Quincy, in 1778, didn't look forward to the prospect of eight long hours in the recitation room: "The truth was, I was an incorrigible lover of sports of every kind. My heart was in ball and marbles." He went on to become congressman, mayor of Boston and president of Harvard.

Minority Counseling

The Office of Community Affairs and Multicultural Development sponsors workshops, lectures and educational programs for the entire Phillips Academy community. These programs assist students and faculty in examining issues of diversity and anti-racism, with an emphasis on collaboration towards a better understanding of race, class, and diversity within our society.

Community Affairs and Multicultural Development now incorporates Minority Counseling, which continues to provide support services for African-American and Latino-American students at Phillips Academy. Counseling services, of a non-therapeutic nature, are provided on an ongoing basis for any student who wishes these services. The office, located in Phillips Hall on Main Street, also serves as an Afro-Latino Cultural Center and Heritage Library. The center is the meeting location for the Afro-Latino American Society Board meetings. It is available to other groups for meetings and small study groups.

Minority Counseling sponsors programs and workshops for the school. The programs assist students in adjusting to Phillips Academy's rigorous schedule, celebrate the diversity that is present on our campus, and strive to eliminate racism.

In a community such as Andover, all must commit themselves to the goals of the community and to loyalty to each



other. Since education at Phillips Academy is both intellectual and humane, students and faculty derive mutual support from sharing of themselves and their ideals.

Trust and responsibility have many interpretations; these words have become hackneyed from overuse and misunderstanding. But the ideas they embody—sensitivity to others, willingness to explore and respect differing points of view, charity and humility in expressing judgment, readiness to cherish friendship, to depend and to be depended upon—are nonetheless fundamental. Such values can scarcely be legislated and can only be imperfectly defined. Yet the health and happiness of everyone in the community depend on consideration and awareness, restraint and candor, discretion and shared joy. Collaboration toward these imprecise but worthwhile ends is an expectation which all at the Academy hold.



Harriet Beecher Stowe, author of *Uncle Tom's Cabin*, and her husband, a Seminary professor, lived in Stowe House. She is buried in the school cemetery. Mrs. Stowe, who shocked the strict Congregationalist community by giving parties and entertainments for students, was suspected of going to the theater and even of having "Episcopalian leanings."

Claude M. Fuess, *An Old New England School*

The Campus Ministry

Reflective of a diverse student body, the religious ministry at Phillips Academy is also diverse. Priest, minister, and rabbi serve the ongoing liturgical and celebrative needs of the Roman Catholic, Protestant, and Jewish students on campus; the chaplains also teach, counsel, and help organize a variety of community service and social action projects for the entire campus. To meet the needs of students from other spiritual traditions, opportunities are provided for reflection, meditation, and fellowship in a variety of settings.

Community Service Program

The Community Service Program provides opportunities for students to volunteer time in service to the community in Andover and in the nearby city of Lawrence. Volunteers may participate during free time or in place of a sport. Among the many volunteer opportunities are, tutoring children from culturally and ethnically diverse backgrounds to strengthen their learning skills; assisting teachers in their work with physically handicapped and developmentally retarded children; working with children from 3 months to 5-years-old in the Andover Community Child Care Center on campus; the Big Brother and Big Sister program in Lawrence; The Academy Manor Nursing Home in Andover.

The program's primary goal is that participants learn a deeper appreciation of themselves and their potential, and to achieve personal growth in the service of others fulfilling the mandate of the academy's motto, *Non Sibi*, not for self.

Activities

Extracurricular activities are an important aspect of a student's education, and Andover offers a rich fare, thanks to the diversity of interests in the student body. From the Chess Club to the Computer Club, it seems that all Andover students do something special in their free time. The Tour Guide Association handles the responsibility of conducting campus tours for the Admission Office, and older students who are members of the Tutorial Program offer help to fellow students in academic difficulty. The student radio station, WPAA (91.7 FM), is on the air from 6:30 a.m. to 11:30 p.m. daily, serving the local listening area as well as the student body. *The Phillipian*, the Academy's prize-winning, student-run weekly newspaper, is wholly

uncensored; students lay out the paper and do their own typesetting, as well as write the articles and headlines. The *Pot Pourri*, the school yearbook, and the school literary magazine, *The Mirror* (Robert Frost was an early contributor), provide more opportunities for those with a literary bent.

Cultural organizations include the Afro-Latino-American Society, the Asian Cultural Society and others; course-related groups range from the Astronomy Club to the German Club. The Chapel Fellowship, the Newman Club and the Jewish Student Union support the ecumenical ministry in providing active religious communities for Andover students.

At any time during the week, actors and directors will be working on a main stage play or on a student production in the Drama Lab; the Andover Political Economy Club may be listening to a State Department official discuss the Middle East; the Natural History Club may be bird watching on an ocean beach or—if the season is right—the Ski Club may be on its way to the White Mountains of New Hampshire.

Many students make extensive use of school facilities in their free time, whether or not they are affiliated with a club or organization. The Arts Center is a major focus of school life—darkrooms are used almost around the clock, and students and faculty interested in painting, metal sculpture, ceramics or design make use of the center's studios and workshops in their free time. The Music Department also provides facilities for students interested in pursuing music beyond the classroom.

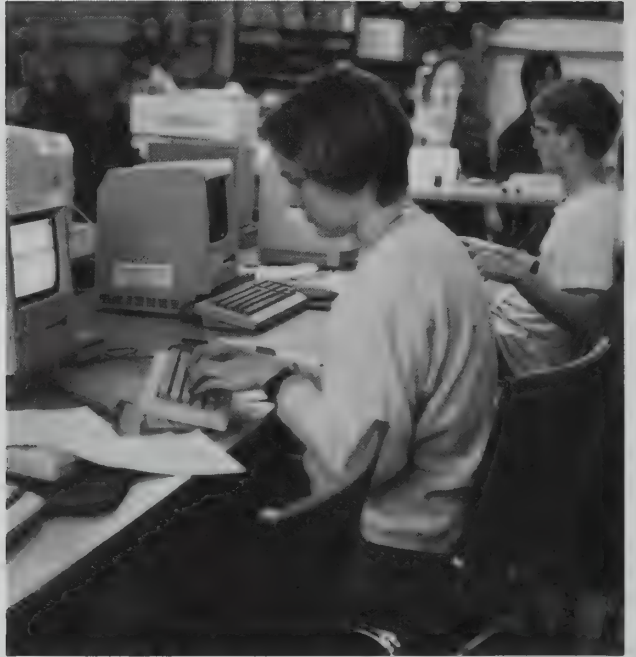
There is no limit to the variety of extracurricular activities at Andover. Students who do not find an existing club or organization that meets their needs are encouraged to start one.

Organizations (Clubs)

Afro-Latino-American Society
All That Jazz (vocal jazz group)
Amateur Radio Club/W1SW
Andover Forum(current events publication)
Asian Society
Astronomy Club
Blue Key Society
Bridge Club
Cercle Francais
Chapel Fellowship
Chess Club
Chorus
Community Service
Computer Club
Dance Club
Equestrian Club

8 'n 1 Club (singing group)
Fidelio Society (madrigal singing society)
German Club
The Heartland Coalition
Jewish Student Union
Just Ordinary Komediens Everywhere
The Leaky Pen (satire club, with publication)
The Mirror (literary magazine)
Model United Nations Club
Mohgul Society (Indian Society)
Natural History Club
Newman Club
Nuclear Awareness/Education Club

The Phillipian (student newspaper)
Philomathean Society (debating society)
The Photography Club
Political Economy Club
Pot Pourri (yearbook)
Press Club
Scuba Club
Ski Club
Strategic Gamers Guild
Tertulia (Spanish club)
WPAA (student radio station)



Educational Resources

The Oliver Wendell Holmes Library

At the center of Andover's intellectual life is the newly restored Oliver Wendell Holmes Library, named after the famous doctor and poet who was a member of the class of 1825. The building, which consists of the original 1930 structure of 30,000 square feet and an addition of 30,000 square feet completed in 1988, contains the academy's main library collection of 100,000 volumes. The stacks are open to students. In addition to academic work, students and teachers use the library collections to explore new fields of interest and to read casually.

The library subscribes to over 260 American and foreign periodicals and daily papers from cities throughout the country. A microfilm file of *The New York Times* is available. Particular library treasures are the Jansson Atlas, printed in Amsterdam in 1657, papers and books of Oliver Wendell Holmes, and one of the world's leading collections of Vergiliana.

The facility also houses the academy's Computer Center, a day student locker area, faculty research carrels, faculty reading room, and a number of classrooms and seminar rooms. The building, which is open to students 80 hours per week, provides both contemporary and traditional settings and a variety of study and lounge seating.

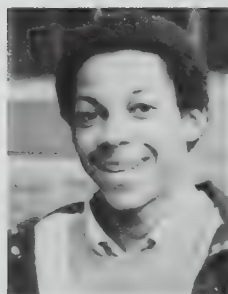
Computer Center

A computer center, located in the lower level of the Oliver Wendell Holmes Library, is available for student use. It houses two computer classrooms and a third lab filled with an array of Macintosh, Apple IIe and Zenith (IBM compatible) computers, Imagewriter, Laserwriter, and various other letter quality printers. A wide range of software is available, and instruction in computer usage is provided. The center is open during the regular operating hours of the library.

The Addison Gallery

The Addison Gallery of American Art operates both as a museum in the traditional sense and as an art center for the school and the community. In addition to organizing exhibits of American art from the collection, the museum staff originates exhibits of contemporary painting, sculpture, photography, video, film and crafts. The museum has pioneered the uses of new media in its programs beginning with video in 1965 and most recently with the utilization of interactive video discs both as exhibition components and for an electronic catalog of The Addison's holdings. Seminars bring artists in close contact with students to discuss contemporary art issues. In cooperation with Phillips Academy's Music Department, concerts by faculty and students are produced in the museum.

The holdings of the museum are recognized as a distinguished specialized collection: Allston, Copley, Morse, Stuart, West and others represent the Colonial period. Of special importance among the many paintings of the nineteenth century are examples by Cole, Doughty, Eakins, Homer, Inness, LeFarge, Ryder, Twachtman and Whistler. The early part of the present century is shown in the work of Bellows, Davies, Demuth, Hassam, Hopper, Luks, Marin, Prendergast and Sloan. Contemporary artists are represented by works of Calder, Lippold, Moholy-Nagy, Hofmann, O'Keeffe, Pollack, Shahn, Wyeth and others.



Sidney Smith, class of 1985, as the President of the Afro-Latino-American Society on campus helped to found NEALSA, the New England Afro-Latino Student Alliance, an organization to promote communication and interaction among students of color at independent schools. NEALSA continues today with many social events among member schools and an annual conference.



The Robert S. Peabody Archaeology Museum

The Robert S. Peabody Foundation for Archaeology has conducted major archaeology research in this hemisphere for the last seventy-five years and has published many reports of its scientific investigations. The Foundation maintains a museum which cares for many famous collections based on some of the most important archaeological expeditions undertaken in the Americas. The laboratories of the museum are used in teaching and illustrating the Foundation's research. Mature students may undertake special study projects which involve the use of the Foundation's collections and library resources.

The Cochran Sanctuary

The Moncrieff Cochran Sanctuary is a sixty-five-acre tract of rare beauty located so close to the center of school activity that it is in fact an extension of the campus. Landscaped areas planted with dogwood, azalea, rhododendron and laurel provide a succession of bloom that draws many visitors from late April to mid-June. A brook and two ponds attract nesting ducks and geese, and extensive natural wild areas, varied in terrain and plant life, provide nesting places for many species of land birds. Cross-country runners and skiers make extensive use of the Sanctuary, as does the Academy's Search and Rescue program.





The Academic Departments

The Curriculum

The curriculum of Phillips Academy contains both a required core of studies believed to be fundamental to a liberal education and elective courses designed to fit the special needs and interests of the individual student. Instruction is given in all subjects required for entrance to higher institutions, whether liberal arts or technical. All departments offer courses beyond the level of preparation for college.

Classroom groups are small enough to permit individual attention; the average class size is fourteen. Students are placed in sections fitted to their attainment and, through accelerated sequences and advanced courses, are encouraged to progress at a rate commensurate with their ability and ambition. Many students fulfill requirements ahead of the normal year, increasing their choice of college-level courses and other elective opportunities. Andover's trimester system provides flexibility and variety in the curriculum and allows various combinations of independent work and off-campus projects.

Every student is assigned an academic advisor who, over the span of the student's career at Andover, joins the student in planning an educationally sound program of studies; a program which is both broad and rigorous, and which takes into account the student's strengths and interests, as well as diploma requirements and college aspirations.

The curriculum and diploma requirements are described in detail in the *Course of Study*, which will be sent upon request to each preliminary applicant and to others who would like to receive it.

THE ARTS



During his second and third years at Andover, Jack Lemmon's grades were suffering due to his overpreoccupation with theatrics and composing. Though things looked very bleak in his senior year, he applied himself diligently and made what he thought was an astounding reversal. Against all odds he was able to graduate. When Headmaster Claude Fuess handed the proud young Lemmon his diploma, he said, "A remarkable change. I'm truly impressed, Bill."

Visual Arts

At the heart of the art program is a concern that all students learn to see freshly and accurately, that they learn how to organize their efforts to make something happen, that they develop a critical eye for the coherence of their environment, all these with an independent mind.

The diploma requirement in art is as follows: Juniors and new Lower Middlers must take a trimester course in studio art; an entering Upper Middler must take a trimester course in studio art or music. Andover attempts to balance structured, problem-solving courses like the basic Visual Studies, with more adventurous advanced courses, organized around longer-term projects. For a student who desires several terms in art or design, the courses are here, whether the student's objective is a professional school, Advanced Placement in a liberal arts college, or simply a strong basis in a traditional area of general education.

The superb facilities of the Arts and Communications Center—fully equipped wood and metal shops, two complete photo labs, print-making equipment, painting and drawing studios, a kinetics studio, computer graphics labs, video studio—are supplemented by the several kilns available to ceramicists. The department welcomes extracurricular use as well as work related to courses, and faculty members are on hand every evening to encourage the idea that whether it's painting or computer graphics, the Arts Center is the place to go.

Theatre and Dance

Courses in theatre are designed for students who seek formal exploration of the elements of stage work and a supplement to (or substitute for) extracurricular work on plays. A variety of experience is available; some courses are performance oriented; some are theory oriented; some are both. All combine classroom and workshop sessions; students work out practical theatrical problems together under the guidance of an instructor. Drama, as well as dance, both modern and ballet, may be elected as an alternative to athletics, once a year.



George Washington Hall, capable of handling audiences of one thousand, includes a flexible, professionally equipped proscenium stage. It has a full fly system, accommodation for numerous lighting instruments and an elevator/pit. Recent main stage productions have included *Richard III*, *Taming of the Shrew*, *The Dining Room*, *Hamlet*.

The Drama Lab, also in George Washington Hall, is a "black box"—an intricate arena/workshop with excellent lighting facilities, suitable for audiences of not more than seventy-five. Although main stage plays are usually directed by a member of the faculty, the Drama Lab allows students to direct plays themselves and to experiment with dramatic styles. A sample of productions from recent years includes plays by Albee, Ionesco, and Pinter but original student work is also performed here.

Theatre students are encouraged—but not required—to supplement their classwork by participating in any of the numerous productions mounted each year.



Music

The Music Department faculty consists of five full-time and several part-time instructors. Other highly qualified instrumentalists are available to teach voice, piano, organ, classical guitar, brass, percussion, strings, and woodwinds.

Andover offers courses for the beginner as well as for intermediate and advanced students both at the applied level (study of musical instruments or playing in a musical organization) and in the history, appreciation, and theory of music.

The Nature of Music, or Music 20, is the diploma requirement in music, and a prerequisite for most courses in the history, appreciation, and theory sections. A more advanced three-part course, Theory of Music, runs in sequence throughout the year.

Graves Hall, the department's newly renovated home, has large rehearsal halls for concerts as well as many individual practice and ensemble rooms, music classrooms, teaching studios and an electronic music studio. Graves Hall also houses

the Timken Recital Hall where faculty, guest, and student recitals take place. The Department also has a large, up-to-date record library and listening room.

The Chorus has a fully equipped rehearsal room and a library of music literature in the Cochran Chapel, a short distance away. The Chapel also houses two new organs for the use of beginning and advanced organ students. One is located in Kemper Chapel; the other, in the main chapel, is a 30-stop, double manual, tracker action instrument.



VISUAL ARTS

Introductory Studio Courses

Visual Studies
Visual Studies for Juniors
Introductory Design
Introductory Ceramics
Introductory Photography
Intermediate Studio Courses
Visual Studies (Art 10) is a pre-requisite for all intermediate courses.

Drawing
Animation
Two-Dimensional Design
Three-Dimensional Design
Intermediate Photography

Advanced Studio Courses

Visual Studies (Art 10) is a pre-requisite for all advanced courses.

Graphics and Photography
Computer Graphics
Painting
Filmmaking
Advanced Ceramics
Printmaking

Advanced Photography
Sculpture
Large Format Photography
Photo Journalism
Kinetics
Architecture
Contemporary Communications
Advanced Placement in Studio Art
Advanced Placement in History of Art

MUSIC

Applied
Beginning Instruments
Recorder Ensemble
Brass Ensemble
Woodwind Ensemble
String Ensemble
Fidelio Society
Band
Chorus
Chamber Orchestra
Private Instrumental and Vocal Lessons
The Nature of Music
Developing Musical Skills
Opera Seminar

History and Appreciation
Independent Study in the History and Literature of Music
Jazz
Popular Music in America

Theory
Orchestration and Conducting
Theory of Music I
Theory of Music II
Theory of Music III
Electronic Music
Advanced Techniques in Electronic Music

THEATRE AND DANCE

Theatre
Introduction to Acting
Public Speaking
Acting and Directing Workshop
Stagecraft
Play Production
Shakespearean Workshop
Playwriting

Dance
Introduction to Dance

CLASSICAL STUDIES

The chief aim of the Department of Classics is to help students rediscover the sense of order and ideals which has been the glory of the ancient world of Greece and Rome. Through its elective courses in Classical Studies, taught in English, students can survey the history and the thought of Classical Civilization and its influence and importance to their experiences in the world we face today.

CLASSICAL STUDIES

Greek Civilization
Roman Civilization
Etymology
Ancient History
Classical Mythology



ENGLISH

Convinced that level of achievement is more important than the number of years a subject is studied, the English Department has established modest but firm diploma requirements. Students must prove themselves competent in writing and reading through the English Competence course and, by taking the Literature Sequence, acquire a sense of the depth and breadth of their literary heritage. For students who enter in the 9th grade, English 10: The Journey, which is a preparation for the Literature Sequence, is also required.

Once the student has successfully completed the diploma requirements, opportunities multiply. Students may enroll in any of the Literature Sequence courses that they have not yet taken, or they may study any of the advanced or specialized courses offered by the department. Seniors may also qualify for an independent project supervised by the teacher of their choice.



ENGLISH

Required Courses

The Myth and The Journey (three terms for all Juniors)

English Competence (three terms for all Lowers)

The Seasons of Literature (two terms for Uppers)

Shakespeare (one term for Uppers)

Competence/Literature (for all new Uppers)

English 350 (optional for one-year Seniors)

English 351 (for students with marginal English)

Elective Courses

Non-fiction Writing

Introduction to Writing

Creative Writing

Literature of Two Faces

Topics in English Literature

American Writers

Writers in Depth

Theme Studies

James Joyce

Man and God

20th Century Drama

Shakespeare on the Page and Stage

The Short Novel

Satire and Comedy

Novel and Drama Seminar

Literature of the Quest

Playwriting

Spenser and Milton

Images of Women

Chaucer and His Age

Studies in Literature



Graceful Bulfinch Hall (1819) has been in Academy use for more than 150 years as a recitation hall, gymnasium, and dining hall and now houses Andover's English classes. Dr. Oliver Wendell Holmes, class of 1825, immortalized "the classic hall" in his poem, "The School-boy," written over 100 years ago for the Academy's Centennial Celebration. In 1984, Bulfinch received a full interior restoration, to reflect its original early 19th century design.

HISTORY AND SOCIAL SCIENCE

The study of history and social science provides certain kinds of knowledge, skills, and understanding fundamental to a liberal education. A study of the American past continues to be a prerequisite for a participating citizen in a constitutional republic. Vital though such a study is, an examination of other cultures, both European and non-Western, is crucial for broadening a student's understanding of an interdependent world. The department of history and social science, therefore, integrates the study of non-Western cultures into courses at every grade level.

For Juniors, the department offers a three-term survey of Western civilization from the ancient through the medieval world. Although the primary goal is familiarity with Western institutions and ideas, students examine contemporaneous developments in the non-Western world. Another sequence, primarily for Lowers, allows students to continue their survey of the modern world—both Western and non-Western—from the 14th through the 20th century. Through these elective courses, students learn skills and concepts essential to the study of history, and thus prepare for more advanced courses in the field.

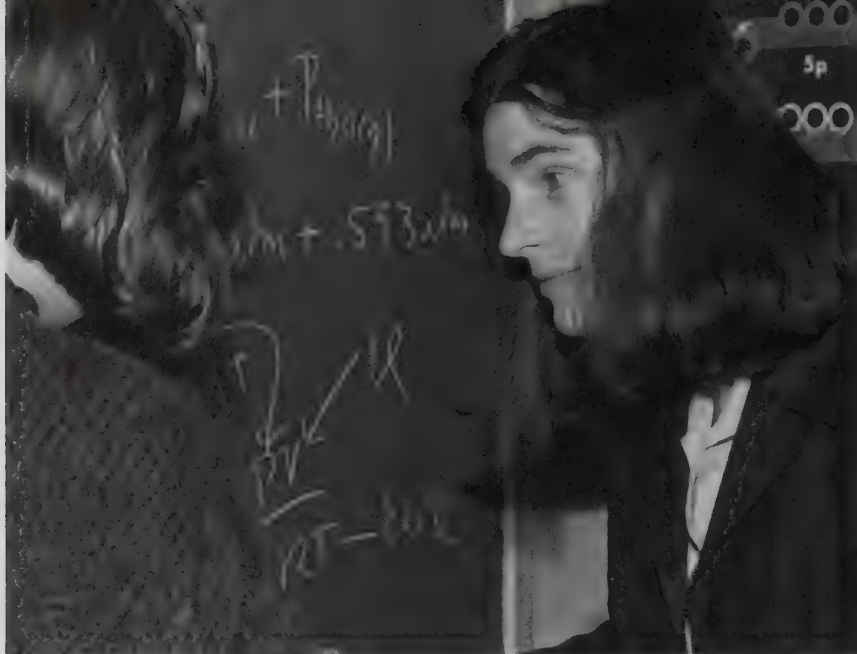
In the Upper year, most students study United States history. Three terms of U. S. history, followed by a term of non-Western history or international social science, satisfies the department's four-term diploma requirement. Seniors may choose from a variety of area histories: Russia, Asia, Africa, Middle East, Latin America; or from social-science courses: Introduction to Economics, Comparative Government, International Relations. A yearlong Advanced Placement survey of Modern European history is also available to Seniors, Uppers, and exceptional Lowers. Seniors who wish to surpass the requirement may take advanced seminars in the Renaissance, Issues in Economics, American Race Relations, Men and Women and American Culture, Social History of Families in America, Courts and Constitutional Development, and Nuclear Weapons.

In the required United States history course and in several of the Senior electives, students write extensive research papers, using government documents, newspapers, letters, diaries, interviews—the

raw materials of history. For qualified Uppers and Seniors, there are two programs of special interest: a student may spend the spring term in Washington, D. C., working as an intern in a congressional office, or may join the Urban Studies Institute, which involves both course work and field work centering on the city of Lawrence.

HISTORY AND SOCIAL SCIENCE

Ancient History
 Classical History
 Medieval History
 Early Modern World
 The World in the Nineteenth Century
 The World in the Twentieth Century
 United States History
 United States History for International Students
 Modern European History
 Introduction to Economics
 Urban Studies Institute
 Comparative Government
 International Relations
 The Russian Experience
 Asia: China, Japan, and Southeast Asia
 Africa and the World
 The Middle East
 Latin American Studies
 History and Mathematics
 Victorian England: England in an Age of Expansion
 Issues in Economics
 American Race Relations
 Men, Women and American Culture
 Nuclear Weapons: Proliferation and Responses
 The Renaissance
 A Social History of Families in America
 The Courts and Constitutional Development,
 1935-1985



MATHEMATICS

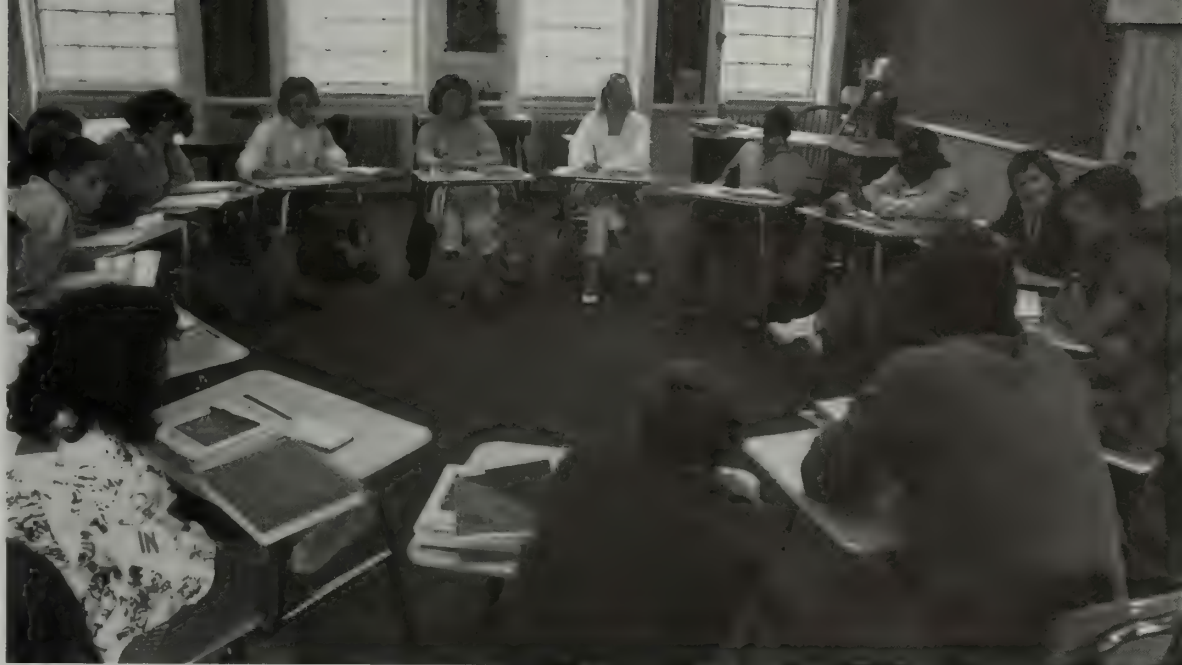
Mathematics at Andover is addressed to several overlapping audiences within the student body: the future citizen of late twentieth century society, immersed in a culture which has been shaped to a large extent by mathematical perceptions of reality; the future user of mathematics, whose vocation may depend upon special knowledge of a mathematical sort; and the future mathematical scholar, who may turn his or her energies and curiosity to the organization of mathematical knowledge.

The mathematics curriculum is built around a core sequence of eight trimester courses, three of elementary algebra, two of geometry, one of intermediate algebra, and two of precalculus topics, completion of which will satisfy the diploma requirements. An additional trimester is required before entering calculus. Students whose previous course was elementary algebra will take *Geometry* unless our placement test indicates a need for further work in algebra first. Those who enter with one year of algebra and one year of geometry will satisfy our diploma requirements by taking intermediate algebra and the first two precalculus trimesters unless the

placement test shows a need for *Algebra Consolidation* first. The latter course prepares the students to take the precalculus courses beginning in the spring term of their first year. There are a variety of special courses designed for new students who fall between the above criteria.

The department also offers many elective courses, descriptions of which may be found in the *Course of Study*. Over one-third of all mathematics is taken electively, much of it in preparation for the Advanced Placement Examinations in calculus. These courses include the study of elementary and advanced calculus, analytic geometry, infinite series, probability, statistics, computer science, linear algebra and vector analysis.

The Mathematics Department is located in Morse Hall, which also houses two computer labs. One lab has 16 IBM Personal Computers (networked) and the other has 7 Apple IIe computers. A variety of computer courses is offered that range from an introduction to computers to preparation for the Advanced Placement tests in Computer Science. Computer languages taught include LOGO and Pascal.



The community of students who like math at Andover is sizeable. They share their curiosity and knowledge by offering to tutor other students at the school, and by participating in interscholastic competition under the aegis of the Math and Computer Clubs.

MATHEMATICS

Courses leading to satisfaction of the diploma requirement

Elementary Algebra

Algebra Review

Geometry

Algebra Consolidation

Geometry and Precalculus

Intermediate Algebra

Precalculus

Elementary Functions

Elective Courses

Analytic Geometry

Calculus

Computer Programming: beginning, intermediate and advanced

Linear Algebra and Vector Calculus

Probability

Statistics

Discrete Mathematics

FOREIGN LANGUAGES

As long ago as 200 B.C. the Latin poet Ennius used to say that because he knew three languages he had three hearts. Andover can render no finer service to today's world than to send forth its alumni with many hearts, ready and able to feel for, to understand, and to respond to the millions of people who speak languages other than English.

Acknowledging the importance of foreign languages, Andover requires for the diploma three years of an ancient or modern language. The ancient foreign languages offered are Greek and Latin, the source languages of Western thought and literature. The modern foreign languages offered are Chinese, French, German, Italian, Russian and Spanish. Emphasis is on the spoken word, and the foreign language is the basis for all communication in the classroom. Small classes make possible maximum participation, with supplementary practice provided by our versatile language laboratory. There are

opportunities to join accelerated classes which complete, for example, the work of four years in three.

At the 4th-, 5th- and 6th-year levels the study of literature may be supplemented by courses in the art, history, geography and music of the foreign country. In upper-level courses students can prepare for Advanced Placement Examinations in language and literature and qualify for advanced courses when they enroll in a college. Superior students may carry out independent projects under careful guidance.

At all levels of study, progress in the foreign language is facilitated, and the resources of the classroom are expanded, through occasional use of communication media (periodicals, radio, videotapes, computers) and such activities as the staging of plays, the use of the school's radio station for broadcasts in foreign languages, festivals, language tables in the dining room, movies, clubs, visits by performing groups, and trips to language events in Boston and at nearby schools and universities. Students are urged to consider opportunities, sponsored by Andover or by other schools, to live and study abroad.

For Andover's School Year Abroad program, and other foreign off-campus opportunities, see page 46.

Chinese

Traditions in China are deep and have been unfamiliar to Western eyes and ears for centuries. In the modern world we have a shared future. Understanding and learning the Chinese language is a key to that future. Andover is one of very few secondary schools to commit itself to a fully integrated, five-year program in Mandarin Chinese.

French

Before the outbreak of the French Revolution, French was considered the universal language of the West. It was the language of diplomacy, was already flourishing as a literary medium and, because of its clarity and precision, reflected both French culture and philosophy, influencing the development of democratic institutions in the United States as well as in other countries. The

study of French rewards the student with the ability to communicate with French-speaking peoples and to appreciate the importance of order in expression, broadening his views through a growing familiarity with the rich and lively literature and civilization that the language represents.

German

German is central Europe's principal language, and knowledge of it opens up an understanding of European culture and affairs. Students may learn German to read the works of Goethe, Schiller, Lessing, Kafka, Hesse, Brecht and Grass in their original form, or to follow the arguments of Hegel and Nietzsche, or perhaps to understand more intimately the background of modern socialism and democracy in the world. Many of the most important developments in modern physics, electronics, chemistry and engineering were originally published in German, and American businesses are realizing increasingly the importance of personnel able to speak German.



Greek

Through the study of Greek, the Department of Classics offers students a feast at the banquet of the first and still most relevant literature of the Western World. Through direct experience with such men as Homer and Plato, students will discover a sense of order and ideals in the expectation that they may apply it, in turn, to the challenges they face today. Greek, as one of the languages chosen to fulfill the diploma requirement, is often elected by students as a second or even third language in conjunction with Latin or a modern language. It remains an important basic course for students with a deep interest in literature or philosophy.

Italian

The growing popularity of Italian in American schools and colleges reflects a growing awareness of the charm of the Italian language and of the rich cultural heritage which it serves. Andover's intensive course for Seniors attracts students with rich experiences in other languages, is conducted in Italian, and has the scope and pace of a course for college freshmen.

Latin

Latin—still? Yes, as futuristic nightmares and present turmoils are reawakening a search for order, perspective and ideals in the human experience, names like Cicero, Vergil, and the *pax Romana* not only symbolize great milestones in that search but also suggest habits of mind that produce enduring greatness—the same habits of mind that show up so clearly in a sentence, paragraph or entire work of Latin literature.

Through the study of Latin, the Department of Classics offers students direct experience in Latin literature, both in the original and in translation, which is rightly called the mother tongue of Western Civilization. Latin, as one of the languages frequently chosen to fulfill the diploma requirement, is also often chosen as a second or third language. It is a particularly valuable experience for students of other European

languages who have an interest in doing advanced study in foreign languages.

Russian

Approximately forty percent of Russian secondary school students are learning English. A fraction of one percent of American secondary school students study Russian. For cooperation, understanding, and influence, our doctors, diplomats, scientists, and businessmen should be able to communicate with Soviet counterparts in Russian.

Since secondary school is the best place to begin, Andover has established a rich program for our beginning as well as our advanced students.

Spanish

The Spanish Department is anxious to help students discover the varied cultural heritage of the Spanish-speaking world through intensive study of the language, both spoken and written.

It seems particularly important to learn a language spoken everyday by millions of Americans across the U.S. In addition, Hispanic literature, from Cervantes to Borges, has played a vital role in world literature, as attested by the frequency with which Hispanic writers have been awarded the Nobel Prize for Literature.

Students who enter the professions will find Spanish an indispensable tool. But whatever they do, Spanish will be the key to a richer, more rewarding life.

The Language Laboratory

The Language Laboratory, located on the second floor of Samuel Phillips Hall, is a facility designed to expand and enhance the classroom experience in foreign languages. Consisting of a microcomputer-controlled cassette system, the lab offers a variety of teaching and learning possibilities for classes or individual students. With a master console and 28 student positions, the lab is always available and supervised during class hours and evenings.

FOREIGN LANGUAGES

Italian offers an intensive introductory course for seniors. All other languages offer introductory and intermediate courses, with opportunities for acceleration at those levels. Students are then eligible for the following courses:

Chinese

Literature, Philosophy and
Language Review
Literature, History and Current
Events

French

Language and Review and
Contemporary French Life
Selected Readings
Village Français
French Civilization
Conversation and Phonetics
Written Expression
Literature and Film: French
Theatre
French Literature
French History
French Civilization Outside of
Europe
Québec et les Québécois
Stylistics

Advanced Placement
Contemporary Literature

German

Literature, Composition and
Conversation
Language and Literature for
Advanced Placement
Special Topics

Greek

First Year: basics of language and
culture
Accelerated First Year: two years
in one
Second Year: Xenophon, Plato,
New Testament
Third Year: Homer and Euripides
Fourth Year: Sophocles, lyric
poetry, Thucydides

Latin

First Year: basics of language and
culture
Accelerated First Year: two years
in one
Second Year: Cæsar, Ovid, Nero
Third Year: Cicero, Vergil,
Apuleius
Fourth Year: Vergil, Suetonius,
Catullus
Fifth Year: Vergil, Tacitus, Pliny,
Horace

Russian

Literature, Composition and
Conversation
Advanced Literature, Composi-
tion and Conversation
Russian Press
Literature
Special Topics
Russian History and Literature

Spanish

Second and Third Year, Ad-
vanced, with winter term in
Mexico
Spanish Language Review
Aspectos de la Cultura y Civiliza-
ción del Mundo Hispánico
Introduction to Literature, with
Grammar Review
Literature and Culture, with
Grammar Review
Literature for Advanced Place-
ment
Advanced Studies in Literature
Special Topics: Literature,
Sociology, Culture
Latin American Studies



PHILOSOPHY AND RELIGIOUS STUDIES

The department seeks to initiate students into three distinctive and interrelated human quests: the search for meaning, the search for justice and the search for the foundations of knowledge. The process of initiation is intended not only to provide an introduction to outstanding literature in the field, but also to assist the student in effecting personal appropriation of the search and in developing the necessary qualities and skills for its pursuit.

The department is committed to exploring these basic human concerns with imaginative empathy and by means of dialogue and rational inquiry, so far as these may take us. It seeks to encourage growth in understanding and empathy among different cultures, traditions and social groups. Beyond this the department is not committed to any particular pattern of expression or response to the area of study. No topic, subject or pattern is excluded a priori. Decisions on course offerings and academic projects take into account the interests and background of the students and faculty and the potential for furthering general departmental goals.

Courses are term contained, involve four prepared class periods and are offered at various levels on the following topics:

The Biblical World View
The New Testament Perspective
Religious Discoverers
Varieties of Religious Experience
Introduction to Non-Western Religions
Introduction to Ethics
Proof and Persuasion
Responses to the Holocaust
Views of Human Nature
Law and Morality
Bioethics
Nonviolence in Theory and Practice
In Search of Meaning
Existentialism
In Search of Justice
Great Philosophers

SCIENCE

Biology

Andover provides ample opportunity to develop interest in the biological sciences. In addition to two yearlong courses in introductory biology, the department offers three courses on the advanced placement level, three intermediate courses, and three elementary courses which are particularly well suited to serve younger students. The introductory courses give students a general background and an understanding of some of the current trends in biology. Field trips, laboratory work, independent projects, lectures, slides, films, and video tapes are all part of the courses. Most of the laboratory work performed during the spring term is devoted to independent projects.

The intermediate courses provide an exposure to biology for students who prefer chemistry and physics (since the science requirement specifies some work in both the biological and the physical sciences) as well as providing additional work in biology for students who enjoyed the introductory courses.

Because of recent changes in the Advanced Placement examination we have chosen not to offer a course specifically directed at advanced placement. Students who are particularly interested in biology are encouraged to take biology as juniors or lowers, followed by a year of chemistry and a year of physics, and then to take those advanced biology courses which interest them. The term-contained advanced courses review material presented in introductory courses, present new concepts and techniques, and permit us to study some topics in considerably more depth than is usual in a typical Advanced Placement course. The laboratory and field work in these courses gives students experience with the techniques of chromatography, electrophoresis, spectrophotometry, statistical analysis, dissection, and genetic engineering, as well as qualitative and quantitative field analyses. Computer simulations are also used on our Apple II microcomputers. Many students who take the advanced sequence take the Advanced Placement examination.



Bird watching trips are sponsored occasionally throughout the year by the Natural History Club for interested students who may or may not be enrolled in a biology course. A small animal collection consisting of rats, mice, gerbils, and various reptiles is maintained in Evans Hall. Its population varies with student interest, the reproductive rate of the animals and the dietary needs of the resident boa. In the basement of Evans Hall there is a superb bird collection on loan from Harvard University and an extensive shell collection is exhibited in various parts of the building.

The Evans Hall greenhouse is a refreshing place to visit during the long winter months. Students grow plants there or start potted plants for their own rooms. An environmental growth chamber is available for those interested in experimenting with photoperiodism.

Chemistry

A variety of Chemistry Department offerings are designed to suit the range of interests and abilities of the students in their study of the composition and interactions of the physical world. Three levels of yearlong courses introduce students to atomic structure, elements, chemical

reactions, bonding, gases, liquids, solids, solutions, thermochemistry, kinetics, acids and bases, electrochemistry, nuclear reactions, and organic molecules. There are Advanced Placement offerings for one year or two years of study. In addition, a series of term courses are offered in such areas as general chemistry, organic chemistry, chemistry of nutrition, environmental chemistry, geology, chemical research, and, for ninth graders, an introduction of elements and compounds, which is a lab-oriented class.

The observation and interpretation of chemical phenomena are central in the chemistry curriculum. Students perform laboratory experiments related to course work as well as observe classroom demonstrations. A quantitative understanding of these phenomena is achieved through frequent problem solving. Class library projects, in which students read in the literature on the greenhouse effect, acid rain, and toxic wastes, aim for an appreciation of the application of chemical principles to the "real world."

The department has excellent equipment for experiments in elementary syntheses and analysis, including analytical balances, visible and infrared spectrophotometers, pH meters, voltmeters, a gas chromatograph and a bench top furnace.

Physics and Astrophysics

The Physics Department offers several introductory courses at various levels of difficulty in order to meet the needs of Andover students. Some representative topics are mechanics, waves, heat, electromagnetism, light, and "modern physics." Laboratory work, classroom demonstrations and extensive problem solving enable students to develop both a qualitative and quantitative understanding of the concepts of physics. Also offered are courses including electronics, astronomy, relativity and early quantum theory, and university-level Advanced Placement physics.

The Physics Department operates the Thornton Observatory which houses a research-grade 16-inch reflector, a 6-inch Brashear refractor and six other portable telescopes. These instruments are used in astronomy courses as well as in

project work; recent projects have included such areas as solar, lunar and planetary study; astrophotography; computer simulations; and orbit analysis.

The department is well equipped with laboratory and demonstration equipment such as an air track to eliminate friction, photogates for precise timing, cathode ray oscilloscopes for a multitude of uses, and computers for rapid data analysis, word processing or programming. These items and many more are available and used in classroom demonstrations and student laboratory work.

Past student projects have included laser transmission of information, holograms, the construction of an electronic calculator, speed of light measurements, determinations of the electronic charge and mass, interferometer measurements, and finding the gravitational constant.

PSYCHOLOGY

The Psychology Department offers a variety of elective courses which examine fundamental concepts in the field. Particular emphasis is placed on helping the student explore the interface between psychological knowledge and personal growth. This is accomplished by utilizing teaching strategies which integrate formal academic work with frequent opportunities for student participation and self-exploration. The Introductory Psychology and Developmental Psychology courses offer an overview of the fundamental ideas and classic experiments in psychology and consider the complexity of human and social development.

Biology

Introduction to Zoology
Oceanography
Ornithology
Introductory Biology
Biology
Human Ecology
Human Biology
Animal Behavior
Ecology and Evolution
Human Physiology
Molecular Biology
Laboratory Research in Biology
and Chemistry

Chemistry

Elementary Introductory
Chemistry
Introductory Chemistry
Research in Chemistry
Elementary Organic Chemistry
Advanced Placement Chemistry
Honors Introductory
Chemistry—Advanced
Placement
Geology

Physics

Observational Astronomy



Dr. Charles Abbot, class of 1891, a solar energy pioneer and head of the Smithsonian Institution for many years, predicted in the early 1940's that solar energy would become the primary source of power when oil and coal were depleted. In 1972 he received his last patent, for a device to convert solar energy into electricity, shortly before his 100th birthday.

Cosmology—The Universe Beyond
the Solar System
Introductory Physics
Advanced Physics
(B-level, Advanced Placement
C-level, Advanced Placement)
Electronics
Relativity and Quantum Mechanics

PSYCHOLOGY

Introductory Psychology
Developmental Psychology

OTHER COURSES

STUDY SKILLS

Basic Study Skills
Efficient Reading Skills
Language Skills

PHYSICAL EDUCATION

All Juniors and new Lower
Middlers are required to elect
one trimester of P. E. 10 in
addition to their regular athletic
commitment.
Physical Education



Complementary Programs

Andover's complementary programs combine a number of innovative ideas designed to promote better coordination between public and private education nationally. The concept behind these programs is that of multiple schools. While one school may be accepted as the "home-base" diploma-granting institution, several other institutions may be utilized as complements to this school. Thus far, the multiple schools idea has taken form in several program models which are open to Phillips Academy students as well as students from other schools.

The Phillips Academy Summer Session

The Phillips Academy Summer Session is a six-week, intensive academic program in which both innovative and traditional courses are taught. Courses in all subjects and at all levels demand hard work—harder work than most students have ever before experienced. In addition to English, modern languages, mathematics, history, and the sciences, the curriculum offers such opportunities as Social Psychology, Great Philosophers, Law and Morality, Modern Astronomy, Oceanography and Marine Biology, and Economics.

Other features of the Summer Session are special courses in writing, including the nationally known "Competence in Writing" (developed at Phillips Academy); an expanded ESL Program (English as a Second Language) for foreign students who wish to achieve English fluency; a Chamber Music Program which provides a unique opportunity for able music students in all combinations of piano, strings, winds, and voice, including individual instruction, small ensemble work, orchestra, and chorus; and an intensive Studio Art program for serious students of the visual arts who wish to develop a portfolio in preparation for the Advanced Placement Examination in Studio Art.

The Summer Session makes use of all the school's facilities and is open to able boys and girls from all parts of the country and abroad. Applicants must be graduates of the 8th, 9th, 10th or 11th grades. A catalog can be obtained by writing:

Elwin Sykes, Director
The Phillips Academy Summer Session
Phillips Academy
Andover, MA 01810
Tel. (508) 475-3400, ext. 4400

(MS)²: Math and Science for Minority Students

The (MS)² Program—Math and Science for Minority Students—offers black, Hispanic, and American Indian students from selected urban centers mathematics and science. Ninth grade boys and girls are selected on the basis of their superior ability and strong interest in mathematics and science, as well as financial need. The goal of the (MS)² Program is to prepare minority students to compete successfully for admission to selective colleges and for careers in science, engineering and medicine. Further information can be obtained by writing:

Walter A. Sherrill, Director
(MS)² Program
Phillips Academy
Andover, MA 01810
Tel. (508) 475-3400, ext. 4405

Students currently enrolled at Phillips Academy's regular session are ineligible to attend the Andover Summer Session or the (MS)² Program. Students attending the Andover Summer Session or the (MS)² Program may not apply for admission to the Academy's regular session for a full calendar year.



Randy Pepper, an instructor in English, author, and a contributing photographer to *National Geographic* magazine, created a new course in the 1985 Summer Session entitled "Oceans." A combination of marine biology, environmental studies, and oceanography, the course includes four weeks of study in the labs at Andover, and two weeks "in the field," sailing along the New England coastline aboard the 55' schooner *Madame Sarah Abbot*, named for the founder of Abbot Academy.

School Year Abroad

School Year Abroad offers to qualified Upper Middlers and Seniors a full academic year of living and studying in France or Spain. Originated by Andover, SYA is now jointly sponsored by Andover, Exeter and St. Paul's School. The program gives American students the advantages of living in a foreign culture without sacrificing progress at their home schools or strong preparation for college. Students live with host families, participate in the activities of local athletic and social clubs, and pursue a course of study (both in English and Spanish or French) under the supervision of sponsoring school teachers. SYA offers over two weeks of group travel, all college boards, and provides full academic credit, permitting students to graduate from Phillips Academy with their own class. School Year Abroad is financially independent of its sponsoring schools. Financial aid is available. A catalog can be obtained by writing:

Woodruff W. Halsey II, Director
School Year Abroad
Phillips Academy
Andover, MA 01810

Trimester Programs in Foreign Countries

Andover offers small numbers of qualified students trimester programs in several foreign countries. It is possible for advanced language students to attend a local school in the following cities: Fall Term, Novosibirsk, Soviet Union; Paris, France; Winter Term, Göttingen, Germany; Madrid, Spain; Antibes, France; Spring Term, Guadalajara, Mexico; Bologna, Italy; Beijing, China; summer, Harbin Institute of Technology, Harbin, China; University of Salamanca, Salamanca, Spain. Each program has its special characteristics. For more information consult the Chair of the Division of Foreign Languages.

Other Off-Campus Programs

Andover offers several complementary residential programs. The Washington Intern Program, sponsored by Andover and Phillips Exeter Academy, allows a group of Upper Middlers and Seniors to spend the spring term in Washington working in the offices of U.S. Senators and

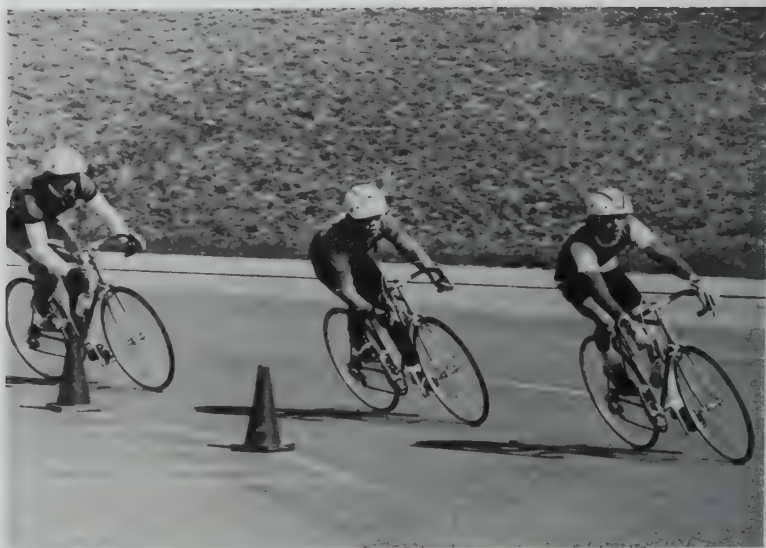


Representatives. Phillips Academy tuition, fees, and financial aid do not cover the cost of this program.

The Mountain School Program of Milton Academy is a semesterlong program for eleventh graders which offers students the opportunity to enjoy a different living and learning experience on a 300-acre farm in Vermont. Phillips Academy students may participate fall term only. Students will continue their academic courses in addition to activities which will emphasize practical skills and crafts. Students will work on the Mountain

School farm which supplies most of the food and heat for the school.

In addition to the School Year Abroad Program, term-contained opportunities for study abroad are available for Seniors with advanced language skills. It is also possible for Seniors to arrange off-campus projects related to their special interests, though tuition rebates are not normally granted for projects which are not part of school-sponsored programs.



Athletics



Following the merger of Abbot and Phillips Academies in 1973, the girls began to share more than the classroom with the boys. The first Phillips Academy Girls' Varsity Ice Hockey team was formed in 1977, and continues today with matches against many independent schools, colleges and universities in New England.

In sports, as in studies, students are expected to meet basic requirements and are given wide choice in broadening and deepening their skills, interests and dedication in athletics. Juniors and new Lowers take a challenge-based Physical Education Course five hours a week for one term in addition to afternoon athletics. While taking this course, students are tested for physical aptitude and instructed in safety, health and exercise physiology.

The required afternoon athletic program includes a wide variety of offerings in varsity and sub-varsity competitive interscholastic sports, in intramural cluster-organized athletics and in instructional, recreational and fitness activities. New students are strongly encouraged to participate for at least one term at Andover in a team sport or a dance performance program.

The school maintains several athletic facilities which include 17 playing fields and 25 tennis courts; the Sorota Track, the Borden, Memorial and Abbot Gymnasium Complex with swimming and diving pools, basketball and squash courts, two dance studios, wrestling room, and weight training rooms; the Case Memorial Cage with its indoor track; the Sumner Smith Hockey Rink; the crew boathouse on the Merrimack River; the ski trails and jump at Holt Hill; and the Search and Rescue Room in Evans Hall which provides the base of operations for Andover's popular outdoor program.

Phillips Academy is committed to a required athletic program that provides a variety of sports and activities to its students. The Academy discourages overspecialization in sports at this age level.

The Athletic Department oversees the program and its facilities with the support and advice of the Faculty Athletic Committee and the Student Athletic Advisory Board.

Isham Infirmary

Phillips Academy employs a full-time physician/medical director, a licensed school nurse-practitioner, and registered nurses to staff Isham Infirmary. Isham has approximately 600 inpatient admissions and 7500 outpatient visits per school year. There are dentists and a dental hygienist who are available for routine care and emergencies. An orthopedic clinic is run weekly by an orthopedic surgeon, in conjunction with three full-time athletic trainers who supervise rehabilitation, prac-

tices and athletic competitions. A dermatology clinic is held monthly and a registered dietitian is available for consultation with students upon request. The Graham House Counseling Center employs three psychologists, who are available to students seven days a week.

The Isham staff maintains close contact with approximately forty medical and dental specialists in the greater Lawrence and Boston communities, who are readily available for consultation. Isham Infirmary also welcomes requests for follow-up and continuing care from students' home physicians.

ATHLETICS

FALL TERM

Boys

Ballet
Basics (fitness)
Crew
Cross-Country
Football
Karate
Modern Dance
Paddle Tennis
Search & Rescue
Soccer
Squash
Table Tennis
Tennis
Water Polo
Yoga

Girls

Ballet
Basics
Crew
Cross Country
Field Hockey
Karate

Modern Dance
Paddle Tennis
Search & Rescue
Soccer
Squash
Table Tennis
Tennis
Volleyball
Water Polo
Yoga

WINTER TERM

Boys

Aikido
Ballet
Basics
Basketball
Gymnastics
Hockey
Modern Dance
Paddle Tennis
Search & Rescue
Skiing:
Competitive
(Alpine and Nordic)

Recreational
(Cross Country)
Squash
Swimming
Track
Wrestling
Yoga

Girls

Aikido
Ballet
Basics
Basketball
Gymnastics
Hockey
Modern Dance
Paddle Tennis
Search & Rescue
Skiing: Competi-
tive (Alpine and Nordic)
Recreational (Cross Country)
Squash
Swimming
Track
Yoga

SPRING TERM

Boys

Ballet
Baseball
Basics
Crew
Cycling
Golf
Karate
Lacrosse
Modern Dance
Search & Rescue
Softball
Squash
Tennis
Track
Yoga

Girls

Ballet
Basics
Crew
Cycling
Golf

Karate
Lacrosse
Modern Dance
Paddle Tennis
Search & Rescue
Softball
Speedball
Squash
Tennis
Track
Yoga



In the 1840's the widow of Principal Osgood Johnson devoted herself to the care of sick Seminary students at Samaritan House, built and named for that purpose, now a student dormitory. In spite of this, rows of gravestones mark the toll of epidemics. An Academy graduate of 1890 reports that no such care as Widow Johnson's was available to the Academy students of the 1890's: "There was no infirmary. If you were ill, it was nobody's business but your roommate's, who brought you meals from Marland's unappetizing fare."

CALENDAR 1990-91

Fall Term

Sept. 9, Sun.	Faculty return
Sept. 13, Thurs.	New students arrive and register
Sept. 15, Sat.	Old students return and register
Sept. 17, Mon.	Classes begin
Oct. 19, Fri.	Mid-term academic review
Oct. 26-28 Fri.-Sun.	Parents' Weekend (all parents)
Oct. 29, Mon.	College Visiting Day (no classes)
Nov. 20, Tues.	Thanksgiving vacation begins, 1 p.m.
Nov. 26, Mon.	Thanksgiving vacation ends, 8 p.m.
Dec. 3, Mon.	Classes end, 1 p.m.
Dec. 8, Sat.	Winter vacation begins, 12 noon

Winter Term

Jan. 3, Thur.	Winter vacation ends, 8 p.m.
Feb. 1, Fri.	Mid-term academic review
Feb. 4, Mon.	Mid-winter holiday (no classes)
March 5, Tues.	Classes end, 1 p.m.
March 9, Sat.	Spring vacation begins, 12 noon

Spring Term

March 26, Tues.	Spring vacation ends, 8 p.m.
April 22, Mon.	College Visiting Day (no classes)
April 26, Fri.	Mid-term academic review
May 25, Sat.	Classes end, 12 noon
June 2, Sun.	Commencement
June 7-9 Fri.-Sun.	Alumni Reunions
June 27, Thurs.	Summer Session begins
Aug. 7, Wed.	Summer Session ends

Admission

"Youth from Every Quarter"

The School's *Constitution*, written in 1778, states that Andover "shall be ever equally open to Youth of requisite qualifications from every quarter." With this principle in mind, the basic requirement for admission to Andover today continues to be evidence of sound character and strong academic achievement. The school is especially interested in candidates who demonstrate independence, maturity and concern for others, in addition to high

performance in particular studies or activities. Valuing diversity in its student body, the school seeks to bring together a community from all parts of the country and from many nations.

In our experience, chronic illness, handicaps or other limitations are not a barrier to success at Phillips Academy. The school will discuss such problems individually and advise on the appropriateness of the application. Our ultimate goal is to insure the health and happiness of every student.

The school's endowment covers approximately one-third of the cost of an Andover education. Therefore, in fact, every student receives financial aid. In addition, because of the generosity of a large number of alumni and friends, further financial assistance is available (see School Costs and Affordability, page 54).

Day Students

Effective at the start of the 1990-91 academic year, Phillips Academy will change its policy on who may apply as day students. Beginning in September, 1990, students residing in several cities and towns may choose whether to apply as day students or as boarders.

Important: This is a one-time only choice which must be made when the application is submitted to the Admission Office.

Students residing in Andover or in North Andover *must* apply as day students. Applicants from the following cities and towns have a choice: Atkinson (NH), Boxford, Dracut, Georgetown, Groveland, Haverhill, Lawrence, Lowell, Lynnfield, Methuen, Middleton, North Reading, Pelham (NH), Plaistow (NH), Reading, Salem (NH), Tewksbury, and Wilmington.

Families are urged to consider carefully all aspects of each option, including transportation, finances, accessibility to the variety of on-campus activities, and the relative merits of home living vs. school residence for the student. The Admission Office will be happy to assist families in reaching the best decision for their needs.

APPLICATION PROCEDURE

Priority will be given to those candidates who complete the application procedure, including the interview, by February 1. A decision from the Admission Committee will be mailed on March 10. The possibility of admission is considerably lessened for all applicants who complete the process after February 1, and decisions for this group may not be rendered before May 1. A deposit of \$500 is required to reserve a place at the time admission is offered to an applicant.

If you have a question:

About Andover's admission or application procedures, call or write:

Admission Office
Phillips Academy
Andover, Massachusetts 01810-4161

Admission Office direct line:
(508) 475-9353

Academy switchboard:
(508) 475-3400 ext. 4050

Office hours:
Monday through Friday, 8:30 a.m. to 4:30 p.m.
Saturday, 8:30 a.m. to 12:00 noon, October 1 through January 31.

Steps To Be Completed For Application

1 Submit The Preliminary Application Card and the non-refundable \$30 fee as soon as possible. (Checks are payable to the Trustees of Phillips Academy.) **Applications will not be considered unless the Preliminary Application Card and Fee are received.**

2 Complete The Personal Interview Requirement. Candidates must complete the required interview by February 1. Candidates are urged to schedule interviews in either the spring, summer or early fall of the year before they intend to matriculate. It is in everyone's best interest for the interview to take place as early as possible. A visit to the Academy is desirable as it gives candidates a chance to have questions answered and to see the school. Please allow two hours for the tour and interview and be sure to dress with the weather in mind. **Candidates who cannot visit the Academy are themselves responsible for arranging an interview with an Alumni Admission Representative (See page 58.)**

3 Return The Final Application Forms. Final application forms, mailed in mid-November to candidates who have filed preliminary applications, should be completed and returned **as soon as final or mid-semester grades are available for the fall term. The transcript must include current grades for application to be complete.** Priority consideration is given to applications completed by the advertised deadline of February 1. ("Late applicants" should return forms immediately.) Teacher recommendations should be from current teachers. We cannot accept any application forms by FAX.

4 Take The Secondary School Admission Test. (12th Grade or Postgraduate candidates are not required to take the SSAT.) Although we prefer the SSAT, candidates who wish to present the Educational Records Bureau's Independent School Entrance Examination (ISEE) may do so.

Secondary School Admission Test

The Bulletin of Information for Candidates, published by the Educational Testing Service, Princeton, NJ 08540, will be sent by Andover to all 1990-91 candidates who have filed a Preliminary Application. This Bulletin describes the Secondary School Admission Test, which will be given on the following dates:

December 8, 1990	January 19, 1991*
March 2, 1991	April 27, 1991*
	June 15, 1991

**International administration*

Candidates are strongly urged to take the SSAT administered in December, 1990. (The December test will not be given in foreign countries.) Otherwise, the candidates should take the January, 1991 administration.

Early Decision

Andover does not participate in any early decision plan for admission.

Twelfth Grade Or Postgraduate Candidates

Instead of the Secondary School Admission Test, Senior and Postgraduate candidates must take either the Preliminary Scholastic Aptitude Test (P.S.A.T.) or the Scholastic Aptitude Test (S.A.T.) of the College Board Scholastic Aptitude Tests (C.E.E.B., Box 592, Princeton, NJ 08540).

Postgraduates are full-fledged members of the Senior Class and are eligible for all school activities. Because of their academic credits, they frequently have maximum flexibility in course selection.

School Costs and Affordability

Tuition and Fees, 1990-91

The tuition charge for 1990-91 is \$14,600 for boarding students and \$11,150 for day students.

The average annual cost to educate a student at Andover is approximately \$21,500. The difference between the annual cost and the tuition charge is made up from gifts and income from endowment, which itself is the product of the generosity of alumni, parents and friends.

To reserve a student's place for a given school year, a deposit in the amount of \$500 must be received by May 1 in the case of a returning student, or by the acceptance deadline in the case of a newly admitted student. It is non-refundable under any circumstances.

The tuition less the above deposit is billed in two equal amounts, with the fall payment due August 1, and the final payment due December 1. The award of scholarship aid or loan reduces the billed amount accordingly.

No refund will be made of the fall tuition for any student who withdraws, is dismissed, or is absent for any reason after registration in the fall. No refund will be made against the final payment for any student who withdraws, is dismissed, or is absent for any reason after returning to school at the beginning of the winter trimester.

An optional Tuition Refund Plan is offered, at 2.0% of tuition, to protect against the departure of a student for any reason. Under this plan 75% of the unused portion of the tuition for school days remaining is refunded.

Tuition covers instruction, board, room (including basic furniture), physical training and most athletic privileges, use of laboratory equipment and material, admission to all authorized athletic contests and most authorized entertainments at George Washington Hall or elsewhere on campus, including the Saturday evening movies.

The school provides sports uniforms and most athletic equipment. Students are required to bring their own footwear and urged to bring along whatever other personal athletic equipment they already possess.

Other Expenses

Tuition charges do not include tutoring, language training, special instruction in music or certain athletics, materials fees for art courses, medical expenses, laundry, textbooks, dues to school organizations or breakage and damage to school property. Tuition charges do not include cost of participation in the Washington Intern Program, School Year Abroad, or other off-campus programs.

Many of these expenses will be similar to those a student would experience if he or she were at



home: laundry and cleaning; dues and publications and spending money. Travel expense will vary according to home location. Books and supplies depend on course selection, and are approximately \$850.

Bills for items not included in tuition charges may be rendered at any time during the school year. All charges must be paid by their due date in order to assure a student's place at the Academy. Students with past-due bills may be asked to leave any time. The diploma of the Academy will not be awarded to Seniors whose school accounts are not paid in full by June 1.

Financial Aid and Financial Planning

Financial need should never discourage a student from applying for admission to Phillips Academy. Andover offers full Scholarship Grants for low-income families, and Scholarship Grants and low-interest, deferred-payment Student Loans for a broad spectrum of need. To help all Andover families with financial planning, the school has created The Andover Plan, an innovative package of five payment options.

Financial Aid Budget: \$4,700,000

Scholarship Grants: \$4,450,000
Average grant for returning students: \$9,750

Student Loans: \$250,000 in 1990-91
(presently at 6% interest)

If you are not sure whether you qualify for financial aid of some kind, we encourage you to apply; this is the best way to find out.

Because Andover values and seeks an economically diverse student body, aid is awarded only on a basis of demonstrated need. Need depends on many variables, such as family income, number of children, age of parents, other tuitions, unusual medical expenses, taxes, assets, liabilities, etc.



To apply for financial aid:

1. When you make out the Preliminary Application be sure to check "yes" for financial aid.
2. Andover will send you the Parents' Financial Statement (PFS). Fill it out and send the original to the School Scholarship Service (SSS) in Princeton, NJ. The SSS uses a formula nationally accepted among independent schools to analyze need, and provides Andover with a preliminary estimate of your family's ability to contribute to educational expenses. The process assures that all schools to which a student applies will base their calculations on the same data.
3. Send a copy of the PFS to Andover *prior to January 15*, along with the most recent IRS 1040 form, or other income tax form used.

Requests for aid filed after the January 15 deadline may not be processed in time to be included in the initial allotment of scholarship funds. Requests filed after January 15 must await subsequent availability of scholarship monies.

In case of divorced or separated parents:

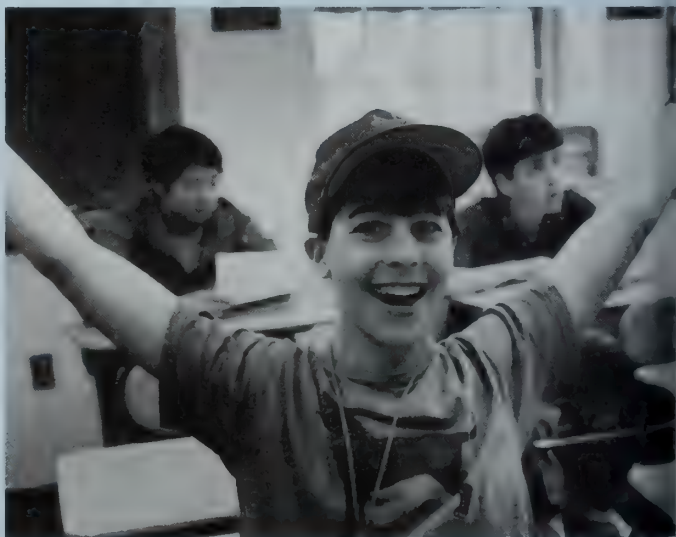
The resources of both natural parents must be considered in cases where a divorce or separation has taken place. This information should be included on the financial statement provided by the school. The availability of complete information from both parents is essential to assure a fair assessment of the family contribution. Lack of this information may result in no award of aid or an arbitrarily low financial aid package.

Financial aid award letters are mailed in the same envelope as the Certificate of Admission, on March 10.

For more detailed information, direct your letter or telephone call to the Director of Financial Aid, Phillips Academy, Andover, MA 01810. Telephone: (508) 475-3400 (ext. 4050).

Financial Planning: THE ANDOVER PLAN

All families, whether or not they are receiving financial aid or loans, benefit from planning carefully the way in which they will pay for their children's education. Accordingly, last February Andover created The Andover Plan, five different payment options, which were designed with the help of the Philadelphia National Bank and the Knight Tuition Payment Plans of Boston. Briefly the options are: a one-time tuition payment that avoids tuition increases; fixed monthly payments that avoid tuition increases; access to a revolving credit loan; arrangement of a monthly budgeting plan; and arrangement of an insured monthly savings plan. All students who are enrolled on a full-time basis are eligible for these plans, which are explained in detail on the following page.



THE ANDOVER PLAN

*Guaranteed Tuition
Single Payment*

*Guaranteed Tuition
Extended Payment*

*Annual Educational
Expense Line
of Credit*

*Monthly Budgeting
(Pay Plan)*

*Interest-Free
Payment Plan*

Features:

Families prepay tuition from their own resources for a student's entire Andover education at the entry-level cost times the number of years, e.g., four for a junior, three for a lower, two for an upper.

Families prepay tuition for a student's entire Andover education at the entry-level cost times the number of years through a loan with fixed monthly payments extending beyond graduation
Loan convertible to college loan with extended repayment terms
Repayment term of 10 years
Interest rate fixed for term of loan or variable at prime plus one percent

Annual tuition expenses (or family contributions for financial aid recipients) can be borrowed as needed at prime plus one percent
Loan convertible to college loan with extended repayment terms
Repayment up to 14 years from first use of line of credit (1/120 of outstanding balance per month)
Pay tuition bills as due via Philadelphia National Bank checks made payable to Phillips Academy

Annual educational expenses (or family contributions for financial aid recipients) in 10 equal monthly payments
Application fee of \$50
Participation on a yearly basis
Family pays Knight Tuition Payment Plans which pays Phillips Academy

Monthly savings plan for families. Monthly payments are made to an FDIC-insured Money Market account which earns current market interest
Application fee of \$50
Multiple year plan

Benefits:

No tuition increases

No tuition increases
Loans can be secured with a second mortgage, permitting deductibility of interest
No origination fee and low interest rate

Flexibility by having access to a revolving line of credit
Loan can be secured through a second mortgage, permitting deductibility of interest
Borrow only amount needed
No origination fee and low interest rate

No interest
Payments are spread over 10 months
Optional life and disability insurance
Families may budget any annual amount of expense over 10 months

No finance charges
No credit check
Interest is paid on any net deposits
Life and total disability insurance provided from the date of the first payment
Payments are spread over the period of education, e.g., four years for a junior, three for a lower, two for an upper, one for a senior
Families can begin saving for college

Eligibility:

Families not receiving financial aid

Families not receiving financial aid

Both families receiving financial aid and those not receiving financial aid

Both families receiving financial aid and those not receiving financial aid

Both families receiving financial aid and those not receiving financial aid

Obligation:

Prepayment of entire four, three, or two years of tuition at first year's rate

Repayment of loan begins immediately

Repayment of loan begins immediately

Monthly payments to Knight

Monthly installments to Knight

Source:

Family funds

Loan

Loan

Family funds

Family funds

Alumni Admission Representatives

While it is advisable from the student's point of view to visit the school, distance frequently renders a visit impractical. When this is the case, the candidate should write or telephone for an interview with the most conveniently located Alumni Admission Representative. When you arrange for an interview with an Alumni Admission Representative, please notify the Andover Admission Office of the date of the interview and the name of the interviewer. This procedure will help us keep your records up-to-date. A candidate unable to arrange for an Alumni Admission Representative Interview should communicate with the Admission Office for assistance. All interviews with Alumni Admission Representatives must be conducted by January 31 or the candidate will not receive a March 10 decision. Applicants interviewed after January 31 will be considered as late candidates.

ALABAMA

Birmingham

A. H. Gaede, Jr. '57
Bradley, Arant, Rose & White
1400 Park Place Tower, 35203
(205) 521-8323 (W)

ALASKA

Anchorage

John K. Brubaker '55
2110 Otter Street, 99504
(907) 279-3581 (W)

Fairbanks

K. Andre McMullen '66
741 Chena Hills Drive, 99709
(907) 479-2964 (H)
(907) 452-4761 (W)

ARIZONA

Phoenix

Richard L. Morse '53
101 N. 7th Street, #159, 85034
(602) 621-4828 (W)

William C. Torrey '49
4250 East Camelback Road
Suite 115K, 85018
(602) 955-0744 (H)
(602) 952-2386 (W)

Tucson

Donald B. Rollings '70
363 South Meyer, 85701
(602) 623-4091 (H)

ARKANSAS

Little Rock

Mose Smith III, M.D. '48
5326 W. Markham St., Ste. 14,
72205
(501) 664-1527 (H)

CALIFORNIA

Berkeley

Francisco Nahoe OFM Conv. '80
St. Francis of Assisi Friary
2012 Del Norte Street, 94707
(415) 524-7702 (H)

Peter J. Stern '81
1709 Shattuck Avenue, #105,
94709
(415) 845-5944 (H)

Beverly Hills

Thompson K. Vodrey '52
1529 Gilcrest Drive, 90210
(213) 275-5529 (H)

Burlingame

Maxwell Steinhardt '73
1436 Balboa Avenue, 94010
(415) 342-1293 (H)

Corona del Mar

John E. Kidde '64
3907 Inlet Isle Drive, 92625
(714) 640-7075 (H)

Huntington Beach

James B. Blackmon '57
McDonnell Douglas Astronautics
5301 Bolsa Avenue, 92647
(714) 786-8500 (H)

Long Beach

Alan Fox '60
Petrolane, Inc.
P. O. Box 1410, 90806
(213) 427-5471 (W)

Los Angeles

Patrick A. Cathcart '64
Hancock, Rothert & Bunshoft
515 South Figueroa St, Ste. 1230,
90071
(213) 623-7777 (W)

David A. Cathcart '57
Gibson, Dunn & Crutcher
333 S. Grand Avenue, 90071
(213) 229-7308 (W)

George W. Davis III, M.D. '52
4616 Keniston Avenue, 90043
(213) 294-1226 (H)

Tony De La Rosa '78
Andrews & Kurth
555 S. Flower St., Suite 2850,
90071
(213) 489-3444 (W)

Mrs. Elizabeth Figus '42
818 N. Doheny Drive, #703, 90069
(213) 550-1971 (H)

Trevor A. Grimm '56
Kaplanis & Grimm
621 S. Westmoreland Ave., #200,
90005
(213) 380-0303 (H)

Joon Y. Kim '80
1640 Brockton Avenue, Apt. #16,
90024
(213) 842-7650 (H)

Thompson K. Vodrey '52
Let's Live Magazine
444 N. Larchmont Blvd., 90004
(213) 469-3901 (W)

Kenneth Wan '86
3759 S. Canfield Avenue, #203,
90034
(213) 841-2087 (H)

Marina del Rey
Jeffrey L. Reuben '78
4350 Via Dolce, #104, 90292
(213) 301-0464 (H)

Menlo Park
Carey Orr Cook '61
1065 Trinity Drive, 94025
(415) 854-3132 (H)
(415) 398-7474 (W)

William Ming Sing Lee '51
271 West Floresta Way, 94028
(415) 854-4918 (H)

Peter W. Lee '60
1100 Trinity Drive, 94025
(415) 394-3472 (W)

Northridge
Johnson Lightfoote '69
10914 Crebs Avenue, 91326
(818) 366-7770 (H)
(818) 783-3472 (W)

Oakland
Patrick J. O'Hern '65
Lawrence Livermore
21 Bowles Place, 94610
(415) 422-4874 (W)

Pacific Beach
Anne W. Rollings '75
P. O. Box 90878, 92109
(619) 483-4206 (H)

Palo Alto
Donald A. Way '63
320 Kellogg Avenue, 94301
(415) 323-0445 (H)
(415) 324-0606 (W)

Pasadena
Stephen Bache '75
Yosemite Asset Management
94 S. Los Robles Avenue
Suite 330, 91101
(818) 792-8144 (H)
(818) 795-2613 (W)

Robert J. Cathcart '64
677 LaLoma Road, 91105
(213) 441-2916 (H)
(213) 622-5555 (W)

Thomas J. Keefe, Jr. '50
710 Pinehurst Drive, 91106
(818) 577-2418 (H)

Pico Rivera
Charles D. Burnside '58
Northrop Corporation
8900 E. Washington Blvd., 90660
(213) 948-8667 (W)

Riverside
Peter C. Parsons '55
Riverside County
Publishing Co.
P. O. Box 4157, 92514
(714) 689-1122 (W)

San Anselmo
H. Leonard Richardson '45
5 Oakhill Drive, 94960
(415) 453-4934 (H)
(415) 459-0533 (W)

San Diego
Norman R. Allenby '51
Hillyer & Irwin, Ste. 1400
530 B Street, 92101
(619) 234-6121 (W)

San Francisco
Hobart M. Birmingham, Jr. '62
Graham & James
One Maritime Plaza, 3rd Fl,
94111
(415) 954-0200 (W)

DeWitt K. Burnhnam, Jr. '74
133 Seventh Avenue, 94116
(415) 567-5897 (W)
(415) 668-7309 (H)

Nathaniel M. Cartmell III '69
Pillsbury, Madison & Sutro
P. O. Box 7880, 94120
(415) 983-1570 (W)

Samuel R. Miller '66
Morrison & Foerster
345 California Street, 29th Fl.,
94104
(415) 434-7230 (W)

Martin Quinn '60
311 California St, 10th Fl., 94104
(415) 956-2828 (H)

San Jose
Samuel C. Dysart '46
3337 Lake Albano Circle, 95135
(408) 238-2699 (H)

San Rafael
William S. Creighton '39
32 Woodoaks Drive, 94903
(415) 492-0637 (H)

San Marino
F. Jack Liebau '81
665 Canterbury Road, 91108
(818) 578-1234 (W)

Santa Ana
Reginald D. Barnes, Jr. '58
Crysen Corporation
825 Parkcenter Drive, 92705
(714) 835-6505 (W)

Santa Barbara
W. Wright Watling '68
Beaver Free Corp., Ste. 200
200 E. Carrillo Street, 93101
(805) 963-1631 (W)

Temple City
Jeffrey Hiroto '77
10520 Freer, 91780
(818) 350-8221 (W)

Torrance
Samuel R. Suitt '57
1745 Maple Avenue, #73, 90503
(213) 320-7864 (H)

COLORADO

Boulder
Wayne E. Robinson, Jr. '78
3250 O'Neal Circle, Apt. 21H,
80301
(303) 443-5586 (H)

Colorado Springs
Josephine Boddington '41
1433 Alamo Avenue, 80907
(719) 634-5679 (H)

Denver
Anthony T. Accetta '61
1600 Stout Street, Ste. 1500,
80202
(303) 595-0333 (W)

William W. Grant '49
545 Race Street, 80206
(303) 321-1566 (H)

William R. Rapson '63
1099 18th St., Ste. 2600, 80202
(303) 297-2600 (W)

David C. Wilhelm '38
700 East 9th Avenue, 80203
(303) 894-9444 (W)

George R. Ireland '74
1428 East 4th Avenue, 80218
(303) 744-7664 (H)

Englewood

William W. Cline '69
4000 S. Bellaire St., 80110
(303) 825-4200 (W)

CONNECTICUT

Darien

Peter Hawkins '69
14 Beach Drive, 06820
(203) 655-3271 (H)
(303) 655-1023 (W)

David E. Winebrenner IV '58
27 Briar Brae Road, 06820
(203) 323-1874 (H)

Greenwich

Gerard E. Jones '55
One Deer Lane, 06830
(203) 869-1441 (H)

Hartford

Daniel C. Tracy '57
Arthur Andersen & Co.
One Financial Plaza, 06103
(203) 280-0576 (W)

New Haven

Margaret K. Schwarzer '81
Yale Divinity School
409 Prospect St., 06511
(203) 436-3557 (H)

Ridgefield

Peter G. Pappas '63
50 Blackman Road, 06877
(203) 431-8148 (H)

Stuart Sawabini '73
7 Sugar Maple Lane, 06887
(203) 431-3365 (H)

Weston

Mrs. Andrew P. Langlois '62
9 Tower Drive, 06883
(203) 222-0234 (H)

Westport

Robert B. Simonton '50
25 Woody Lane, 06880
(203) 227-4060 (H)

DELAWARE

Newark

The Rev. Mr. John Barres '78
Holy Family Catholic Church
15 Gender Rd. P. O. Box 8093,
19714
(302) 368-4665 (W)

Wilmington

Mrs. Reeves W. Hart '47
18 Briar Road
Briarwood, 19803
(302) 764-0361 (H)

DISTRICT OF COLUMBIA

Washington

Douglas O. Adler '70
Verner, Liipfert
901 15th Street, N.W., Ste. 700,
20005
(202) 371-6037 (W)

Daniel W. Aibel '76
1113 D St., S.W., 20003
(202) 475-0011 (W)

Stephen B. Clarkson '55
Gardner, Carton & Douglas,
Ste. 750
1001 Pennsylvania Avenue N.W.,
20004
(202) 347-9200 (W)

Andrew P. Ireland '48
House of Representatives
2416 Rayburn House Bldg.,
20515
(202) 225-5015 (W)

Franklin L. Lavin '75
332 E Street, N.E., 20002
(202) 544-7775 (H)
(202) 861-0770 (W)

Maj. Gen. Barry R. McCaffrey '60
Hdqtrs. Dept. of Army Office of
the Deputy Chief of Staff for
Operations
(DAMO.SS) 20310
(202) 695-5032 (W)

FLORIDA

Clearwater

Daniel H. Jenkins '62
118 Windward Island, 34630
(813) 441-6118 (W)

Jacksonville

Robert B. VanCleve, M.D. '50
Riverside Clinic
2005 Riverside Avenue, 32204
(904) 387-7689 (H)

Miami

Carlos de la Cruz '59
3201 N.W. 72nd Avenue, 33122
(305) 599-2337 (W)

Xavier Esteves '68
4036 Malaga Avenue, 33133
(305) 460-7801 (W)

Roberto Martinez, Esq. '71
1581 Brickell Ave., Apt. 205,
33129
(305) 856-3077 (H)





Naples

Kenneth D. Krier '68
4840 Whispering Pine Way,
33940
(813) 263-7197 (H)

Pensacola

Peter H. Williams '70
State Attorney's Office
190 Governmental Center, 32501
(904) 932-0068 (H)
(904) 436-5300 (W)

Tampa

Ronald J. Floto '61
6422 Harney Road, 33610
(813) 621-0233 (W)

David A. Kennedy '60
Kennedy, Frost
Investments, Inc.
101 E. Kennedy, Ste. 2975, 33602
(813) 221-7525 (W)

GEORGIA

Atlanta

Herbert R. Elsas '28
Sutherland, Asbill & Brennan
3100 First Atlanta Tower, 30383
(404) 658-8709 (W)

Louis J. Elsas II, M.D. '54
Emory Univ., Medical Genetics
2040 Ridgewood Drive N.E.,
30322
(404) 727-5840 (W)

Gregory Googer '74
476 Plainville Drive, S.W., 30331
(404) 696-5979 (H)

James E. Hackett, Jr. '73
100 Biscayne Drive, C5, 30309
(404) 351-2427 (H)
(404) 350-7000 (W)

Paul M. Nelson '68
305 Delmont Drive, 30305
(404) 240-0094 (H)

Timothy S. Perry '65
Alston and Bird
One Atlantic Center
1201 W. Peachtree, 30309
(404) 881-7000 (W)

Dalton

Denis P. Donegan '52
514 Loveman Lane, 30720
(404) 226-1644 (H)
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Fundicion Chagres, Cia. Minera
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Mexico, D.F.

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MOROCCO

Tangier

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Statistical Information for 1989-90



In 1864 Shimeta Neesima left Japan as a stowaway on the clipper ship *Wild Rover* for America and sold his samurai sword for a Chinese New Testament. He was adopted by the shipowner, an Andover trustee, was christened Joseph Hardy Neesima, graduated from Andover in 1867, later from Amherst and the Andover Theological Seminary, and became the first Japanese to be ordained a Congregationalist minister. Neesima returned to Japan to found The Doshisha, a great university in Kyoto dedicated to Japanese and Christian ideals. Doshisha recently celebrated its 101st birthday.

Geographical Distribution*

U.S.V.I. & P.R.	4
Massachusetts	400
Rhode Island	6
New Hampshire	44
Maine	16
Vermont	13
Connecticut	58
New Jersey	35
New York	153
Pennsylvania	31
Delaware	1
District of Columbia	9
Maryland	18
Virginia	21
West Virginia	6
North Carolina	19
South Carolina	7
Georgia	5
Florida	24
Alabama	1
Tennessee	6
Mississippi	3
Kentucky	8
Ohio	18
Indiana	4
Michigan	8
Iowa	8
Wisconsin	2
Minnesota	2
South Dakota	0
North Dakota	1
Montana	0
Illinois	35
Missouri	2
Kansas	1
Nebraska	1
Louisiana	1
Arkansas	2
Oklahoma	5
Texas	20
Colorado	10
Wyoming	2
Idaho	1
Utah	0
Arizona	8
New Mexico	1
Nevada	0
California	80
Hawaii	2
Pacific Islands	1
Oregon	5
Washington	7
Alaska	0
TOTAL U.S.	1115

*Based on place of current residence,
not citizenship.

Austria	1
Bahamas	1
Bangladesh	1
Belgium	2
Bermuda	3
Botswana	1
Brazil	1
Canada	6
Republic of China	2
People's Republic of China	3
Ethiopia	1
France	8
Germany	4
Great Britain	1
Greece	1
Hong Kong	6
India	1
Italy	2
Ivory Coast	1
Japan	3
Jordan	1
Korea	1
Kuwait	1
Mexico	3
Nigeria	2
Norway	1
Pakistan	1
Panama	1
St. Lucia	1
Saudi Arabia	9
Senegal	1
South Africa	2
Spain	7
Switzerland	2
Syria	1
Thailand	1
Tunisia	2
USSR	11
United Arab Emirates	2
Zambia	1
Total Foreign	100
Total U.S.	1115
SCHOOL TOTAL	1215

	<i>Girls</i>	<i>Boys</i>	<i>Total</i>
Seniors	190	215	405
Uppers	148	171	319
Lower	142	161	303
Juniors	94	94	188
	574	641	1215
Total Boarding Students			945
Total Day Students			270
TOTAL			1215

College Admission

Admission to colleges is not based on a student's mere presence at Andover, but is based on how well the student has used this experience. At the center of a student's college candidacy lies the transcript, including the course of study and grades, fortified by teacher comments and standardized testing. All selective colleges exercise judgments relative to factors over and above academic ability in selecting a freshman class. While some of these factors relate to exceptional talents in one area or another, others are related to diversity in background and educational objectives.

The college admission picture is entirely different and infinitely more complex now than it was in past decades. Competition for admission to selective colleges is rigorous, and Andover students are encouraged to apply across a range of choices to colleges with varying degrees of selectivity. The one constant in all of this should be a real desire to educate oneself. To this end the College Counseling Office works with the class as a whole and with each candidate to help each one draw up a list of colleges that makes sense.

Phillips Academy seniors go to college well prepared for the academic program and social experience that lie ahead.



College Matriculations for the Class of 1989

The Class of 1989 applied to 200 different colleges and matriculated at 99 colleges and universities.

College	Admitted	Matriculated	College	Admitted	Matriculated	College	Admitted	Matriculated
American U.	3	1	Gonzaga	1	1	St. Andrews/Scot.	1	1
American U./Paris	1	1	Grinnell	3	1	Skidmore	14	2
Barnard	15	5	Hamilton	17	7	Smith	9	2
Bates	12	3	Hampton U.	3	1	U. South (Swanee)	1	1
Bennington	3	2	Harvard	28	22	U. Southern Calif.	5	2
Boston College	16	4	Haverford	6	3	Stanford	17	10
Boston U.	24	8	Hobart	4	1	Swarthmore	7	3
Bowdoin	6	4	Holy Cross	10	3	Syracuse	18	5
Brandeis	3	1	Howard	5	3	Trinity	18	4
Brown	41	23	Ithaca	3	1	Tufts	18	4
Bucknell	9	1	Johns Hopkins	18	1	Tulane	14	4
U. of California			Kenyon	8	2	Union	4	1
Berkeley	22	8	Lake Forest	3	1	US Coast Guard Acad.	1	1
UCLA	9	2	Lewis & Clark	1	1	U. S. Naval Academy	1	1
Carleton	3	2	U. Lowell	3	1	Vanderbilt	8	1
Carnegie Mellon	11	2	Macalester	11	2	Vassar	33	8
U. Chicago	15	2	Marietta	1	1	U. Vermont	20	2
Colby	17	4	MIT	10	8	Virginia Tech.	1	1
Colgate	10	4	U. of Massachusetts	19	4	U. of Virginia	9	2
Colorado College	6	3	McGill/Canada	8	2	Washington College	1	1
U. of Colorado	16	1	U. of Michigan	23	5	Washington & Lee	2	2
Columbia	19	11	Middlebury	11	5	Wellesley	12	3
Columbia SEAS.	6	3	Mount Holyoke	7	1	Wesleyan	30	8
Concordia/Canada	1	1	New York Univ.	13	3	W. Virginia U.	1	1
Connecticut College	11	2	SUNY, New Paltz	1	1	Whittier	2	2
Cornell	29	11	UNC, Chapel Hill	5	1	William Smith	7	1
Dartmouth	14	7	UNC, Greensboro	3	3	William & Mary	8	4
Dickinson	7	3	Northwestern	29	6	Williams	5	4
Duke	23	10	Oberlin	18	6	Yale	27	21
Earlham	4	1	Occidental	7	2			
Emory	17	7	U. of Pennsylvania	38	8			
Friends World	1	1	Pomona	8	1			
Georgetown	27	9	Princeton	19	12			
George			U. Rhode Island	3	2			
Washington U.	7	1	Rice	4	2			
			U. Richmond	4	2			
			U. of Rochester	12	2			



TRUSTEES

DAVID M. UNDERWOOD '54
B.A.
President
elected 1983
elected President 1989
Houston, Texas

DONALD W. MCNEMAR
B.A., M.A., Ph.D.
Clerk
elected 1981
Andover, Massachusetts

FREDERICK W. BEINECKE '62
B.A., J.D.
Treasurer
elected 1980
elected Treasurer 1989
New York, New York

WILLIAM WADE
BOESCHENSTEIN '44
S.B.
elected 1971
Perrysburg, Ohio

STEPHEN BRADNER BURBANK '64
A.B., J.D.
elected 1980
Philadelphia, Pennsylvania

RICHARD LEE GELB '41
A.B., M.B.A.
elected 1976
New York, New York

RICHARD GOODYEAR '59
B.A., LL.B.
elected 1989
Los Angeles, California

ROBERT LIVINGSTON
IRELAND III '38
A.B., LL.B.
elected 1960
New York, New York

CAROL HARDIN KIMBALL '53
A.B.
elected 1974
Lyme, Connecticut

ELIZABETH PARKER POWELL '56
B.A., M.A., M.B.A.
elected 1980
Wellesley Hills, Massachusetts

BARBARA CORWIN TIMKEN '66
B.A.
elected 1988
New York, New York

ALEXANDER B. TROWBRIDGE '47
B.A.
elected 1985
Washington, D.C.

JOHN D. MACOMBER '46
B.A., M.B.A.
elected 1987
New York, New York

Alumni Trustees

KATE SIDES FLATHER '59
B.A.
elected 1986 for 4 years
Concord, Massachusetts

HENRY G. HIGDON '59
B.A.
President of Alumni Council
elected 1988 for 2 years
Greenwich, Connecticut

MOLLIE LUPE LASATER '56
B.A.
elected 1988 for 4 years
Ft. Worth, Texas

RICHARD JONES PHELPS '46
B.A.
elected 1988 for 4 years
Hingham, Massachusetts

DONALD L. SHAPIRO '53
A.B., B.A.
Co-Chairman of the Alumni Fund
elected 1988 for 2 years
New York, New York

GEORGE BUNDY SMITH '55
B.A., L.L.B., M.A., Ph.D.
elected 1986 for 4 years
New York, New York

Trustees Emeriti

PHILIP KIRKHAM ALLEN '29
A.B.
1969-1980
Andover, Massachusetts

GEORGE BUSH '42
A.B.
1967-1980
Washington, D.C.

MELVILLE CHAPIN '36
A.B., J.D.
1974-1989 (President 1981-1989)
Cambridge, Massachusetts

JOHN LEWIS COOPER '31
A.B.
1968-1981
Dover, Massachusetts

CHARLES APPLETON MEYER '35
A.B.
1969-1988 (Treasurer 1976-1988)
Lake Forest, Illinois

JOHN USHER MONRO '30
A.B.
1958-1983
Jackson, Mississippi

GERARD PIEL '33
A.B., D.Sc., Litt. D., L.H.D., LL.D.
1969-1985
New York, New York

HEADMASTER'S OFFICE

DONALD WILLIAM MCNEMAR
Headmaster
B.A., M.A., Ph.D.

JOHN BACHMAN
Executive Assistant to Headmaster
A.B., M.A., Ph.D.

JANE H. MUNROE
Executive Secretary to the Headmaster

OFFICE OF THE DEAN OF FACULTY

HELMUTH W. JOEL, JR.
Dean of Faculty
B.A., M.A., Ph.D.

LYNDA DIAMONDIS
Secretary to the Dean of Faculty

OFFICE OF THE DEAN OF STUDIES

SUSAN R. MCCASLIN
Dean of Studies
A.B., M.T.S.

HERBERT HARRY MORTON, III
Registrar
A.B.

STEPHEN D. CARTER
Scheduling Officer, Associate Dean of Studies
Sc.B., M.A.L.S.

ROSEMARIE ARMSTRONG
Recorder
B.S.

DEANS OF THE RESIDENTIAL CLUSTERS

HENRY BOND WILMER, JR.
Dean of Residence
B.A., M.A.

REBECCA M. SYKES
Abbot Cluster
A.B., M.S.W.

PAMELA BROWN
Pine Knoll Cluster
L.D., B.A., M.Ed.

WILLIAM W. SCOTT
Rabbit Pond Cluster
B.A., M.A.L.S.

MARC DANA KOOLEN
West Quadrangle South Cluster
B.S., M.S.

LORING GOSFORD KINDER
Flagstaff Cluster
B.S., M.S.T.

DAVID B. POTTLE
West Quadrangle North Cluster
B.A., Ph.D.

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Associate Dean
B.A., M.A.T., M.A.

BUSINESS OFFICE

NEIL H. CULLEN
Chief Financial Officer
B.A., M.A., Ph.D.

SUSAN GARTH STOTT
Director of Personnel and Business Services
B.A., M.C.R.P.

DONALD H. BADE
Comptroller
B.B.A.

JUDITH A. HAUPIN
Associate Comptroller
B.S.

OFFICE OF ADMISSION AND FINANCIAL AID

JEANNIE FORD DISSETTE
Dean of Admission
A.B., M.A.

JAMES F. VENTRE
Director of Financial Aid
B.A.

PETER L. DRENCH
Associate Dean of Admission
B.A., M.A.

ELIZABETH B. EATON
Admission Officer
B.A.

ROBERT A. EDWARDS
Associate Dean of Admission
B.A.

D. SCOTT LOONEY
Assistant Dean of Admission
B.A.

ELIZABETH E. MOORE
Associate Dean of Admission
B.A.

JOHN T. O'BRIEN
Assistant Dean of Admission
B.A., M.A.L.S.

HOLLY D. WESTON
Admission Officer
B.A., M.B.A.

FACULTY 1989-90

The date following the name indicates the year the instructor joined the Andover faculty. This reflects the faculty for the 1989-90 school year.

J. ELAINE ADAMS (1982)
Instructor in Physics and Astronomy (on leave)

B.S. Gordon; Ph.D. Northeastern

ALLEN C. ADRIANCE (1989)
Secretary of the Academy
A.B. University of North Carolina

MAX ALOVISETTI (1986)
Director, Psychological Services, Chair, Psychology Department, Instructor in Psychology
B.A., M.A. City College of NY; Ph.D. Univ. of RI

CHARLES EMORY APGAR, III (1969)
Instructor in Physics
A.B. Earlham; M.A.T. Brown

JORGE ARTETA (1986)
Instructor in Spanish
B.A. Tufts

VINCENT B.J. AVERY (1976)
Instructor in Religion and Philosophy on Margaret & Maurice Newton Teaching Foundation

S.T.L. Gregorian; S.T.D. Academia
Alphonsiana, Rome

JOHN E. BACHMAN (1987)
Executive Assistant to Headmaster
A.B. Johns Hopkins, M.A. Wesleyan, Ph.D. American University

DONALD H. BADE (1975)
Comptroller
B.B.A. University of Wisconsin

CARROLL WESLEY BAILEY (1970)
Director of Residential Affairs, Instructor in English on the Frederick W. Beinecke Teaching Foundation
A.B., J.D. University of Pittsburgh

ELIZABETH A. BAKER (1989)
Instructor in Chinese and Russian
B.A. Middlebury College

LESLIE BALLARD (1973)
Chair Science Division, Chair Department of Chemistry, Instructor in Chemistry and Biology

B.A. Sarah Lawrence; M.A.T. Harvard

SETH B. BARDO (1981)
Instructor in English
B.A. Yale; M.A.T. Harvard

DONALD THOMPSON BARRY (1980)
Instructor in Mathematics
B.A. Carleton; M.Div. Yale

YOLANDE BAYARD (1973)
Instructor in French
B.S., M.A. Central Connecticut State College

JULIUS M. BELCHER, JR. (1989)
Instructor in Art (Photography)

AUDREY NYE BENSLEY (AA 1965)
Instructor in Art

GORDON GILMORE BENSLEY (1949)
Chair Department of Art, Instructor in Art on the Ammi Wright Lancashire Foundation
A.B. Yale

LOUIS M. BERNIERI (1977)
Chair Department of English, Director Andover Writing Program, Instructor in English
A.B. Harvard; M.A. Middlebury

GEORGE WILLIAM BEST (1958)
Instructor in Mathematics on the John Mason Kemper Foundation
B.S. Union College; M.A. Boston University

CARL BEWIG (1986)
Director of College Counseling
B.A. Oberlin College; M.A.Ed. Washington University (St. Louis)

KATHRYN A. BIRECKI (1984)
Athletic Trainer
B.S. Central Connecticut State University

PRISCILLA KEENE BONNEY-SMITH (1974)
Associate Dean of Residence, Psychological Counselor
A.B. Bates; M.A.T. Brown; M.A. Lesley College

JOANNE Y. BORLAND (1984)
School Physician
A.B. Bryn Mawr; M.D. Harvard

NANCY W. BOUTILIER (1984)
Instructor in English
A.B. Harvard

CAROLE BRAVERMAN (1979)
Instructor in English
B.A. Brooklyn; M.A. Purdue

CAROLYN B. BRECHER (1974)
Instructor in Modern Dance, Assistant in Audio-Visual
A.B. Bard

NANCY B. BROTHER (1981)
Director of Academic Counseling Program
B.S. University of Nebraska; Ed.M. University of Lowell

MICHAEL BROWN (1986)
Technical Director Theatre Department

PAMELA BROWN (1980)
Dean of Pine Knoll Cluster
B.A. Penn State; M.Ed. Boston College; L.D. Certificate Curry College

PETER M. CAPRA (1989)
Director of Planned Giving
B.A. Yale University; M.B.A. New York University

STEPHEN DOUGLAS CARTER (1980)
Scheduling Officer, Associate Dean of Studies, Instructor in Mathematics
Sc.B. Brown; M.A.L.S. Wesleyan

A. JOHN PATTEN CHIVERS (1960)
Instructor in German
A.B. Wesleyan; A.M. Middlebury

PETER M. CIRELLI (1989)
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B.M. New England Conservatory

ANDREW J. CLINE (1979)
Instructor in Mathematics
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DAVID OWEN COBB (1968)
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MIS. COGLIANO (1989)
Instructor in Chemistry
B.S., M.S. University of Stockholm

ALLEN D. COMBS (1988)
Instructor in Music
B.Mus. University of Idaho

Faculty

THOMAS EDWARD CONE, III (1966)
Instructor in Biology
B.S. Trinity; M.A.T. Brown

CATHERINE A. CONSIGLIO (1987)
Instructor in Music
B.M. Wichita State Univ., M.M. New England Conservatory

SANDY M. CONSIGLIO (1989)
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B.M. Virginia Commonwealth University; M.M. New England Conservatory

CHRISTOPHER CAPEN COOK (1964)
Instructor in Art
A.B. Wesleyan; M.F.A. University of Illinois

JENIFER M. COOKE (1983)
Director of Alumni & Development Information Systems
B.A. Dartmouth

ALBERT COONS (1979) (on leave)
Instructor in Mathematics
B.A. Johns Hopkins

DOUGLAS EVERETT CRABTREE (1971)
Instructor in Mathematics on the Jonathan French Foundation
A.B. Bowdoin; M.A. Harvard; Ph.D. University of North Carolina

BRUCE M. CRAWFORD (1980)
Director of Physical Plant
B.S., M.M.S. Lowell Tech

ROBERT LEE CRAWFORD (1971)
Instructor in History and the Social Sciences
B.A. Northwestern; S.T.B. The General Theological Seminary; M.A. University of Pennsylvania

ELIZABETH W. CULLEN (1987)
Director of Parent Fund
B.A. University of Rochester; M.A. Cornell

NEIL H. CULLEN (1986)
Chief Financial Officer
B.A. U of Rochester; M.A. Cornell; Ph.D. Michigan State U

MARGARITA CURTIS (1986) (on leave)
Instructor in Spanish
B.A. Tulane; B.S. Mankato State Univ.; M.S. Harvard University

KATHLEEN MARY DALTON (1980)
Instructor in History and the Social Sciences on Cecil F.P. Bancroft Teaching Foundation
B.A. Mills; M.A., Ph.D. Johns Hopkins

STEPHEN C. DEMOS (1989)
Instructor in Architecture
A.B., M. Arch. Harvard

JEANNIE FORD DISSETTE (1985)
Dean of Admission on the Joshua Lewis Miner, III Deanship of Admission Foundation
B.A., M.A. University of Pennsylvania

GEORGE MACNAMARA DIX (1972)
Chair Department of Spanish; Instructor in Modern Languages
A.B. Brown; A.M. Middlebury

PETER L. DRENCH (1986)
Associate Dean of Admission, Instructor in History and the Social Sciences
B.A. Cornell Univ.; M.A. Tufts University

TANYA DRENCH (1987)
House Counselor
B.S. Simmons; M.A. Lesley

PAULA F. DREWNANY (1981)
Instructor in Mathematics on Lumpkin Family Bicentennial Instructorship
A.B. Smith; M.A.L.S. Dartmouth

MARY RIMER DUKE (1987)
Instructor in French
B.A. Oberlin; M.A. Middlebury

FRANK MCCORD ECCLES (1956)
Instructor in Mathematics on the Independence Teaching Foundation Endowment, Co-Director of Andover Dartmouth Teachers Institute
B.S.M.E. Princeton; M.A. Harvard

HELEN M. ECCLES (1975)
Co-House Counselor, Co-Director of Andover Dartmouth Teachers Institute
A.B. Bryn Mawr

GEORGE HOWARD EDMONDS (1961) (on leave)
A.B. Amherst; Ed.M. Harvard

PATRICIA HOPE EDMONDS (1974)
Director of Capital Development
A.B. Mount Holyoke, M.A.T. Radcliffe

ROBERT EDWARDS (1986)
Associate Dean of Admission
B.A. Howard University

ERIC V. EITEL (1989)
Director of Foundation & Corporate Support
B.A. Siena College

ADA M. FAN (1983)
Instructor in English
B.A. Harvard-Radcliffe; M.S. Boston University; M.A. University of Rochester; Ph.D. University of Rochester

SUSAN FAXON (1986)
Curator of Addison Gallery
B.A. Smith College; M.S. Columbia School of Architecture

MARION FINBURY (AA 1969)
Associate Director of College Counseling
A.B. Vassar

SUSAN B. FUGLIESE (1989)
Assistant Director of Annual Giving
B.A. Colby-Sawyer College

SHAWN FULFORD (1989)
Instructor in Mathematics
B.S. William and Mary; M.A. Duke University

MICHAEL GANDOLFI (1989)
Instructor in Music
B.M., M.M., New England Conservatory

EVERETT GENDLER (1977)
Jewish Chaplain, Instructor in Religion and Philosophy
B.A. University of Chicago; M.H.L. Jewish Theological Seminary

EDWARD B. GERMAIN (1979)
Instructor in English
B.A., M.A., Ph.D. University of Michigan

PETER ADDLEY GILBERT (1984)
Instructor in English
A.B. Dartmouth; J.D. Georgetown University Law; M.A. University of Virginia

LYDIA BUTLER GOETZE (1980)
Chair Department of Biology, Instructor in Biology
A.B. Radcliffe; M.A.T. Johns Hopkins

ZHENQI GONG (1989)
Beijing Scholar
B.A. Beijing Teachers College

JOHN ALLEN GOULD (1982)
Instructor in English
B.A. Williams; M.A. Indiana University

MARY FULTON GRAHAM (1985)
Instructor in English
 B.A. Mount Holyoke; M.A. University
 of Virginia;
 Ph.D. University of New Hampshire

MAXINE S. GROGAN (1989)
Dean of Summer Session Admission
 B.A. Merrimack

RICHARD K. GROSS, S.J. (1981)
*Roman Catholic Priest, Instructor in
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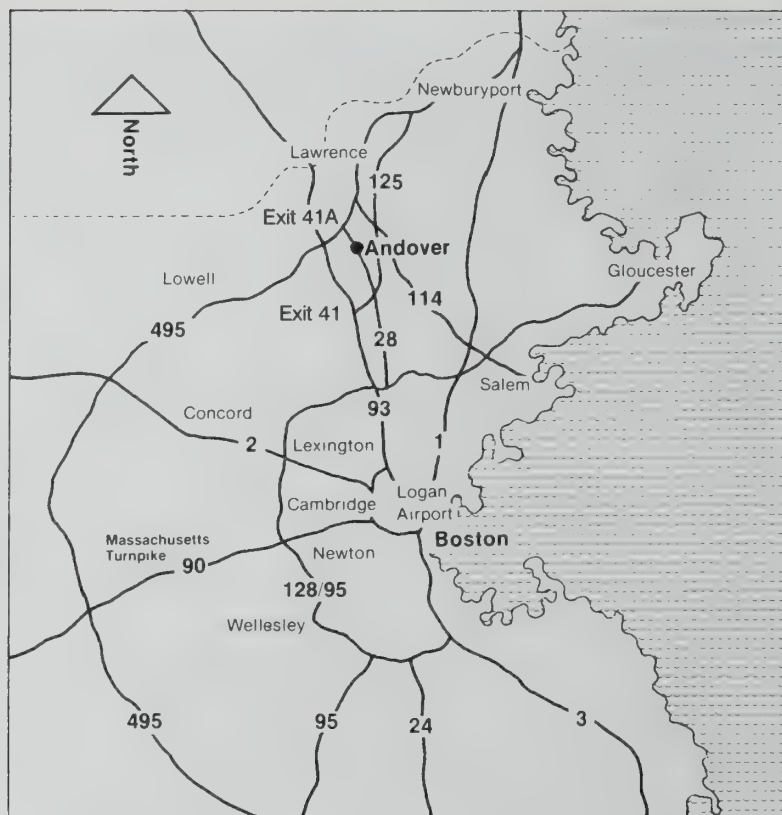


ANDOVER

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*Dormitory



TRAVELING TO ANDOVER

If traveling by car from Boston, take Route 93 north for about 19 miles. Take Exit 41, then turn right (east) on Route 125 for 2 miles. Turn right onto Route 28 and go north about 4 miles to the Andover campus. Turn right at the Bell Tower on the corner of Route 28 and Salem Street. The Admission Office is the first building on the right.

If driving from Logan Airport, follow the signs to Boston via the Sumner Tunnel and follow Route 93 north signs.

From Route 495 north or south take Exit 41A marked Andover and proceed south on Route 28 through the town of Andover. The Phillips Academy campus is approximately one mile south of the Andover center. Turn left on Salem Street, by the Bell Tower.

Merrimack Transportation Co. runs buses to Andover from the Transportation Building in Park Square, Boston. Visitors should call the bus terminal at (508) 686-2777 for up-to-date information.

Inns and Motels in the Area

Andover Inn
Chapel Avenue, Andover
(508) 475-5903

Hampton Inn
Rte. 114, Lawrence
(508) 975-4050

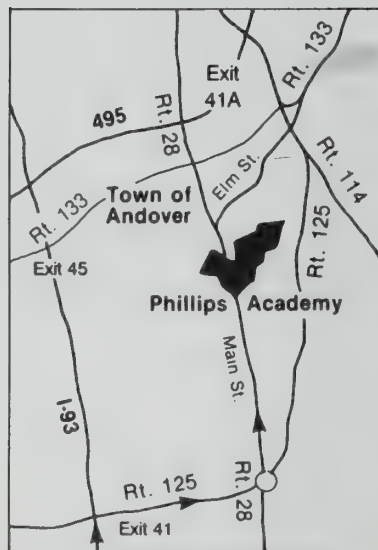
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Hedricks' Bed and Breakfast
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Andover Parent Network

The Andover Parent Network is a group of parents who have volunteered to answer questions about Andover. No one has a better perspective for prospective families than parents who have students currently attending the school. Please feel free to contact these parents at any time in the admission process, whether prior to the first visit, while filling out the application, or after a candidate has been admitted.

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"... a place where teaching occurs
24-hours a day; in the classroom, on
the playing field, in the dormitory"



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